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USSR Report

HUMAN RESOURCES

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LABOR

OFFICIAL INTERVIEWED ON READER COMMENTS ON COLLECTIVE CONTRACTS

Moscow SEL'SKAYA ZHIZN' in Russian 8 May 84 p 2

[Interview with A.I. Iyevlev, USSR deputy minister of agriculture, by Yu.P. Savin; date and place not specified: "The School of Practical Economics --The Contract Suits Those Who Are Organized"]

[Text] There are many letters about problems of the collective contract in the editorial mail. And this is understandable: the progressive form of organization and labor payment is becoming increasingly widespread in the fields and at livestock sections.

Readers write about experience with the activities of contract collectives and are interested in certain aspects of the new form of work. Our correspondent Yu.P. Savin asked the USSR Deputy Minister of Agriculture A.I. Iyevlev to answer the readers' most typical questions.

[Question] Aleksandr Ivanovich, a little more than a year has passed since the celebrated meeting of the CPSU Central Committee Politburo which examined the question of strengthening the organization of work to introduce the collective contract in agriculture. What is the range of application of this form of organization and labor payment today and what results are contract collectives achieving?

[Answer] Last year in kolkhozes and sovkhoses contract collectives raised agricultural crops on one-fifth of the plowed areas. This form of organization and labor incentive is being purposefully introduced in Belgorod, Saratov, Orel, Cherkassy, Surkhan-Darya, and other oblasts.

The collective contract is becoming widespread in livestock sections as well, although more slowly than in the fields. This work is set up best in the Latvian SSR and Novosibirsk, Kuybyshev, Kiev, and Penza oblasts. This work is set up best in the Latvian SSR and Novosibirsk, Kuybyshev, Kiev, and Penza oblasts.

The past year has demonstrated once again that with the collective contract social and personal interests are successfully combined and better final results are achieved. Take Belgorod Oblast, which was the winner of the All-Union socialist competition. Contract brigades and links were responsible for using more than 70 percent of the land there. In these fields the yield of grain proved to be 5.6 quintals per hectare higher and of sugar beets 41 quintals per hectare higher than where piecework was applied.

Of course, the benefits of the contract appear when there is a high level of organization work by managers and specialists. And it has not proven to be at the necessary level everywhere. It happened that a number of contract collectives in Kirov Oblast and the Dagestan ASSR broke up before the harvest. Agricultural organs in Vologda, Smolensk, Pskov, Yaroslavl, and Tambov oblasts and certain oblasts in the Ukraine and Belorussia are doing a poor job of incorporating the progressive form of organization and labor payment.

At kolkhozes and sovkhoses today particular attention is being directed to setting up contract collectives. It is expected that their number will double in crop farming and they will raise agricultural crops on approximately 35-40 percent of the plowed land.

[Question] In this connection the question from N. Sergeyev of Pskov Oblast, K. Yeliseyev from the Altay, and other readers is natural: "What should the size and composition of contract collectives be?"

[Answer] In solving this question farms must proceed above all from the fact that brigades, detachments, and links must be stable. It is precisely stable subdivisions that insure stable production.

Now on to the number of workers. Let us appeal to experience. The Mir Kolkhoz in Torzhokskiy Rayon in Kalinin Oblast has 10-11 people in each contract link. In Bashtanskiy Rayon in Nikolayev Oblast collectives with 20-27 workers have developed. There are also larger brigades.

In other words, there can be no fixed rule here. When crop rotations are assigned to a brigade -- and such subdivisions are becoming more prevalent -- the size of the collective is determined by the calculation method. Consideration is given to the structure of production, the labor intensity of raising crops, the optimal time periods for performing work with the normal regime of labor and rest for those doing the work, the availability of personnel, and their occupational training. It is also based on the fact that the lion's share of work in the brigade (link) should be performed by the workers of the given subdivision.

[Question] This question also turns up in letters: must the collective contract be introduced in stages or in all intrafarm subdivisions simultaneously?

[Answer] An unequivocal answer cannot be given here. The success of the work depends on the readiness and desire of personnel to work in the new way. Practice has demonstrated that those farms which convert all intrafarm subdivisions or all collectives of one sector to the contract at once achieve the best results. For example, initially brigades (links) which work in crop farming may be converted to work in the new way. As a rule, all of them, rather than certain ones. Otherwise it may turn out that different principles of labor payment may operate for workers who perform the same duties at a farm. Disparity in criteria for evaluating the labor contribution leads to unnecessary arguments and misunderstandings.

[Question] N. Aleshin from Orenburg, S. Pivovarov from Alma-Ata, and other readers ask how material incentive is given to the labor of farmers and stock breeders under conditions of work on the collective contract.

[Answer] A most important principle of the work of contract brigades and links is the use of collective payment of workers in proportion to the quantity and quality of output produced and the distribution of collective earnings among them, taking into account the personal contribution to the total result. The evaluation of payment for output is determined based on the production norm. And this norm is based on the actual yield of agricultural crops and the productivity of livestock achieved in previous years with due regard for existing production reserves and resources allotted.

These evaluations may remain stable for up to 5 years. In calculating them, the planned tariff wage fund may be increased up to 150 percent depending on the level of yield of crops, livestock, and poultry. Farm managers have the right to combine means envisioned by existing regulations on labor payment, including additional payment for output and high quality of work, as well as bonuses for output, and to establish progressively increasing evaluations.

As we see, incentive for those who want to work in the new way is important. Some specialists believe that in order to introduce the collective contract, a supplemental wage fund is essential. As a rule, this opinion is unfounded. The following pattern is observed: with the collective contract (of course, where its introduction has been approached in an economically sound manner), the proportion of labor payment in the prime cost of output is sharply reduced.

[Question] At the present time various forms of advance payment prior to obtaining output are applied at kolkhozes and sovkhozes. Which of these can be considered the most efficient? This question is asked by S. Zhuravlev from Kursk Oblast and V. Kaznacheyev from the Mordovian ASSR.

[Answer] In animal husbandry sectors where output is produced continuously (for example, dairy cattle breeding), labor payment for workers should in all cases be made for output each month.

Crop farming is another matter. Here the production period does not coincide with the work period and it lasts for several months. Advance payment must be issued. But how should this be done? The volume of work performed, that is, piecework, cannot be the criterion. In crop farming it is not enough to do a certain volume of work. Where other conditions are equal, a high yield depends primarily on precise observance of technology, schedules, and labor quality. An experienced grain grower, as machine operators say, works "looking backward" -- at what he has done and what this will result in in the next work cycle. Periodic advance payment complies with these demands. Nonetheless, as a rule the advance payment level should be set taking into account the individual qualities of workers and should reflect the quantity and quality of work. Considering the collective's opinion is very important in this matter.

In A.N. Kolesnik's link at the Kolkhoz imeni Frunze in Belgorod Oblast, the machine operators favored equal advance payment -- 120 rubles per month. But at the Risovyy Sovkhoz in the Crimean Oblast, advances were differentiated according to the period of the year: from December through March the figure was 100 rubles, in April, May, October, and November -- 140 rubles, and from June through September -- 160 rubles. Of course, a full advance is paid to the machine operator on the condition that he has worked the prescribed number of days of the month.

There are also other approaches to advance payment. It is important to insure that economic incentive promotes strict observation of technological discipline and puts up a barrier against attempts to try for quantity (hectares) to the detriment of the quality of work, and consequently the yield.

[Question] N. Opanasenko (Krasnodar Kray) and D. Dem'yanova (Vladimir Oblast) ask, what is the best way to distribute collective earnings for output within the link or brigade?

[Answer] In many brigades and links additional payments and bonuses are determined per ruble of advance payment. This method is especially widespread where advance payment is differentiated among collective members. In certain brigades the total earnings are distributed relative to the number of hours worked. A number of farms use the coefficient of labor participation [KTU] extensively to evaluate each person's contribution.

Take for example the Kolkhoz imeni Shchors in Chernobayevskiy Rayon, Cherkassy Oblast; two brigades work in crop farming there and both of them are on contract. And despite the fact that these collective are large in size -- 40-50 machine operators work in them, they have found approaches to distribution of collective earnings and are determining the actual contribution of each person to the final result quite accurately. They have adopted a unit for the base KTU for each machine operator there. This evaluation of the relationship toward work is increased or reduced depending on the skill rating, the group of the equipment operated, the complexity of work performed, combining jobs, and average daily output level. So, for a machine operator with a first class rating, 0.2 is added to the base coefficient and for his colleague with second class rating, 0.1 is added. For people working on caterpillar or high-powered tractors, the KTU is increased by 0.05-0.15. Depending on the average rate of fulfillment of output shift norms for the year, the labor evaluation may be either decreased by 0.1 points or increased up to 0.2 points. Finally, depending on complexity (of the average category of jobs performed), the KTU may also be increased or decreased.

The brigade council may change the KTU, either increasing or decreasing it within limits up to 10 percent. The machine operator's KTU is decreased if a violation of agricultural practices has been noted on his quality coupon.

The KTU ultimately established is multiplied by the number of days worked by each machine operator. The collective fund for monetary payment and payment in-kind for the brigade's labor is also determined in proportion to this indicator (the number of standard KTU-days). Machine operators have adopted this system of accounting. It encourages them to improve their occupational training, to work on more powerful tractors, to master complex and skilled jobs, and to combine work on various types of tractors and combines. It is very important in all cases that the decision on the system for distributing collective earnings for output is accepted by the contract collective workers themselves.

[Question] Is it justified that certain collectives which work on contract do not utilize cost accounting?

[Answer] Practice has demonstrated convincingly that the contract and cost accounting are inseparable. They supplement each other and as a result help

increase the work efficiency of each subdivision working on contract. The contract collective should be interested not only in producing maximum output, but in doing it with the least expenditures of material resources and monetary means as well. Incidentally, the bonus system which exists today is directed toward this purpose -- in crop farming up to 25 percent of the savings obtained as a result of reducing direct expenditures per unit of output or reducing its prime cost as compared to the plan is used to give incentive to the collective, while the corresponding rate in animal husbandry is 40 percent.

Unfortunately, sometimes only assignments for output production and the wage fund reach contract collectives. May it really be said that these brigades and links are on cost accounting?

In other cases, after having established the limits for material and monetary expenditures, no accounting for expenditures of these means is conducted and no calculation of conservation (or overexpenditure) of them is done at the end of the year. Such a formal approach does not promote efficient utilization of resources.

Conversely, where the collective contract is correctly combined with internal cost accounting, they get good final results. Why, for example, do contract brigades at the Turgayskiy Sovkhoz-Tekhnikum in the Kazakh SSR, the Kolkhoz imeni Frunze in Belgorod Oblast, and the Kolkhoz imeni Kalinin in Zaporozhye Oblast obtain higher yields and lower-cost output than their neighbors? Because the machine operators know for a fact that the higher the yield and the lower the direct expenditures, the higher their earnings. In converting to cost accounting, they try to secure the planned volume of output production with the least amount of equipment and other production funds.

Savings of material and monetary means is impossible without well-organized accounting and monitoring of their expenditure. The check system of mutual cost accounting between subdivisions within the farm facilitates this.

[Question] Some of our readers ask to be told about the difficulties most frequently encountered when introducing the collective contract.

[Answer] At the All-Union Economic Conference on Problems of the Agroindustrial Complex, link member A.I. Gurina from the Mir Kolkhoz in Kalinin Oblast said that success in introducing the collective contract depends primarily on the desire and knowledge of those who are in charge of the farm. An accurate observation.

It is well-known that the collective contract requires great organizational efforts at all farms and detailed study of many questions. In light of this, the volume of work for managers and specialists to organize contract subdivisions and insure their successful operation is doubtlessly increasing. Therefore, some of them sometimes do not want to take the range of new concerns upon themselves. This usually occurs with those people who are mastering questions of economizing, organizing, and managing production poorly. From this the conclusion must be drawn that agricultural organs must work more actively on training and retraining personnel and teaching them collective forms of labor and its material incentive.

Errors which sometimes occur in recording expenditures of labor and means and determining the amount of advance payment and distribution of collective

earnings without proper consideration of the collective's opinion also lead to difficulties in relations between members of the collective.

Some managers of contract collectives justifiably complain of such shortcomings in work organization as violation of the operational-management independence of the brigade and link. As a rule, such cases occur where on-farm planning of production is set up incorrectly; where a formal approach has been taken to organizing subdivisions; and where there are no auxiliary transport-management subdivisions, whose use makes it possible not to divert people and equipment from contract collectives during periods of intensive work.

In a number of farms in Bryansk, Rostov, Sverdlovsk, and Kharkov oblasts, evaluations of output were overstated by up to 150 percent because of understating production norms and unjustifiably increasing the tariff wage fund. This resulted in payment for labor increasing faster than labor productivity.

In short, the success of the activities of contract brigades, detachments, and links now depends to a decisive degree on the quality of labor of managers. Their responsibility is even greater since many collectives are young and are undergoing a development period. And it is important to insure that all subdivisions feel the concern for their welfare and understand the importance of their labor.

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LABOR

LABOR OFFICIAL EXPLAINS VOLUNTARY RESIGNATION REGULATIONS

Moscow KHOZYAYSTVO I PRAVO in Russian No 1, Jan 84 pp 84-85

[Article by M. Pankin, chief of a sector of the Legal Department of the USSR State Committee for Labor and Social Problems (Goskomtrud): "Voluntary Resignation"]

[Text] Labor legislation (art 16 of Fundamentals) provides that a worker has a right to annul a labor agreement which was concluded for an indefinite period, that is to resign voluntarily. This makes it possible for him to exercise the right granted by the USSR Constitution as regards the choice of profession and type of occupation and work in accordance with vocation, abilities, professional training and education. Nevertheless, the state is interested in that stable labor collectives are established at enterprises, institutions and organizations and that the turnover of personnel is reduced to a minimum. A great role in this is allotted to the management and public organizations, which must create proper conditions for labor, daily life and rest of workers.

Some legislative acts were adopted lately which are directed at strengthening labor discipline, raising the extent of organization and putting things in proper order at enterprises. In Decree No 1117 of 13 December 1979 "On Further Strengthening of Labor Discipline and Reducing the Turnover of Personnel in the National Economy,"¹ the CPSU Central Committee, the USSR Council of Ministers and the AUCCTU made it incumbent upon the management and public organizations of enterprises and institutions to improve political education work, rationally utilize manpower resources, improve organization of labor and production and adopt other measures aimed at formation of stable labor collectives. Decree No 745 of the USSR Council of Ministers and the AUCCTU of 28 July 1983 "On Additional Measures for Strengthening Labor Discipline"² again devotes attention to these questions.

It was recognized that it is expedient to divide the reasons for voluntary resignation into two types: valid and invalid.

When solving the question regarding the validity of the reason for resignation guidance should be sought in explanation No 5/12-21 of the the USSR State Committee for Labor and Social Problems and the AUCCTU of 9 July 1980³ (with the changes made by the decrees of the USSR State Committee for Labor and Social Problems and the AUCCTU of 25 October 1983⁴).

Valid reasons for voluntary resignation are as follows:

transfer of husband or wife for work to another area, assignment of husband or wife for work or for service abroad and relocation to the place of residence of husband or wife;

illness which hinders continuation of work or residence in a given area (according to a medical evaluation submitted on the basis of established procedure);

the necessity of caring for ill members of the family (given a medical evaluation) or invalids of group 1;

relocation to another area by way of organized recruitment of workers, rural resettlement and a public call-up as well as in other cases when in accordance with decisions of the USSR government the management is required to release workers without hindrance for work at enterprises and organizations of individual sectors of the national economy;

election to positions, which are filled by competition;

enrollment in higher, secondary specialized or other educational institutions, in a postgraduate course or clinical internship;

violation by the management of labor legislation, collective or labor agreement (art 16 of Fundamentals of legislation of the USSR and union republics on labor); and

voluntary resignation of invalids, pensioners due to old age and pregnant women as well as mothers with children younger than 8 years.

Decree No 1117 of 13 December 1979 has increased the period for notification of voluntary resignation from 2 weeks to 1 month for all workers and employees, who wish to change a place of work on their own initiative. This is done so that a worker may ponder more thoroughly all of the reasons which prompted him to change his place of work, and a labor collective in the person of a public personnel department (buro), public organizations and management could adopt all possible measures to eliminate the reasons of a worker leaving and retain him at a given enterprise.

Decree No 745 of the USSR Council of Ministers and the AUCCTU of 28 July 1983 recognized it advisable to increase the period for notification of voluntary resignation for invalid reasons to 2 months. This was reinforced in art 16 of Fundamentals of legislation on labor (in the version of the edict of the Presidium of the USSR Supreme Soviet of 12 August 1983⁵).

The period for preserving continuous length of service during voluntary resignation for invalid reasons was also changed. It is preserved if the break in service does not exceed 3 weeks (21 calendar days). This rule is applied from 1 September 1983.

During voluntary resignation for valid reasons, the continuous length of service is preserved, if the break in service does not exceed 1 month (except for instances when the continuous length of service is preserved even during a longer break in service)⁶.

A question arises in practice regarding the possibility of suspending a labor agreement prior to the expiration of the period set by legislation for notification of resignation. This may be done if an understanding has been reached between a worker and management. However, this understanding concerns only the period of notification but not its basis--it remains the same, that is voluntariness (art 31 of the RSFSR Labor Code [KZot] and corresponding articles of the Labor Code of other union republics) but not the agreement of the sides (art 29 of the RSFSR Labor Code).

If an application for voluntary resignation is due to the fact that a worker cannot continue his work (enrollment in an educational institution, relocation to another area, conversion to pension and so forth), the management annuls a labor agreement in the period requested by a worker.

Instances are also possible when a worker submits an application for voluntary resignation while performing work to which he was transferred for violation of labor discipline. According to sec 2 art 16 of Fundamentals of labor legislation (in the version of the edict of the Presidium of the USSR Supreme Soviet of 12 August 1983), the time spent in performing work to which a worker or an employee was transferred for violation of labor discipline is not counted toward the period for notification of resignation. However, as stated in the explanation of the USSR State Committee for Labor and Social Problems and the AUCCTU of 25 October 1983, taking production interests into consideration, the management in agreement with a worker, who submitted an application for resignation, may annul a labor agreement even prior to the expiration of the period for performance of work to which he was transferred for violation of labor discipline. Resignation in this case is also voluntary and not owing to an agreement of the sides.

If a worker resigns for valid reasons, with which the legislation links the granting of certain privileges and advantages, the entry on resignation is made in the labor book in accordance with par 32 of instructions on the order of handling labor books at enterprises, institutions and organizations, that is by indicating the reasons (for example: "Resigned voluntarily in connection with enrollment in a higher educational institution, art 31 of the RSFSR Labor Code).

One of the measures directed at reducing personnel turnover, including owing to voluntary resignation, is the rule set in par 15 of decree No 1117 of 13 December 1979: during a second voluntary resignation for invalid reasons within a year, the continuous length of service is not preserved.

Workers have a right to recall a notification prior to its expiration period. In such a case he is not dismissed, unless another worker was invited to take his place and who cannot be denied a labor agreement in accordance with the law.

For example, according to art 18 of the RSFSR Labor Code, it is forbidden to deny the conclusion of a labor agreement to a worker who was invited to work by way of transfer from another enterprise based on agreement among supervisors of enterprises. If after the expiration of the period of notification a labor agreement is not annulled and a worker does not insist on resignation, the force of agreement is regarded as being continued.⁷

In conclusion it must be noted that all workers and employees who resign voluntarily, regardless of reasons, do not preserve the continuous length of service that gives a right for a 20-percent increase in pension for old age. They have a right, when there is a definite continuous length of service, only for a 10-percent increase within the limits of the maximum amount of a pension.

FOOTNOTES

1. "Sobraniye Postanovleniy (SP) SSSR" [Collection of Decrees of the USSR], 1980, No 3, p 17.
2. "Sobraniye...", 1983, No 21, p 116.
3. BYULLETEN' GOSKOMTRUDA SSSR, 1980, No 10.
4. KHOZYAYSTVO I PRAVO, 1983, No 12, p 76.
5. "Sobraniye..." op. cit., 1983, No 21, p 117.
6. A reminder, in accordance with the rules for calculating continuous length of service of workers and employees in granting benefits under state social insurance, which were confirmed by Decree No 252 of the USSR Council of Ministers of 13 April 1973, the continuous length of service of persons who have worked in regions of the Far North and areas equated to them is preserved upon taking on other work if the break in service does not exceed 2 months, and regardless of the length in the break of service when going to work after a voluntary resignation due to a transfer of husband (wife) to work in another area.
7. A different procedure for recalling applications for voluntary resignation is established in some union republics.

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LABOR

ECONOMIST WEIGHS WAGE POLICY FOR THE 80'S

Moscow EKONOMICHESKIYE NAUKI in Russian No 4, Apr 84 pp 51-58

[Article by Yu. Kokin, candidate of economic sciences: "Questions of Organization of Wages in the 80's" under the rubric: "Economic Laws and Socialist Management"; passages enclosed in slantlines printed in italics]

[Text] The June (1983) CPSU Central Committee Plenum cited perfecting distributive relations as one of the pressing problems on which Soviet economists must carry out research. "We cannot forget," it was stressed at the Plenum, "that we are living in a /socialist/ society, the development of which must be regulated by the fundamental principles of socialism, which of course includes the principle of /distribution according to labor/... Each of our citizens has the right to only those material goods which correspond to the amount and the quality of his socially useful labor. And only to this. And here strict accounting and strict observance of this principle is important."¹ In the practical realization of the tasks set by the Plenum, a number of principal aspects of the policy and organization of wages in the 1980's occupy an important position, as well as precise definition of the functional load of the basic structural elements of wages, and utilizing them in accordance with their primary purpose.

The Basic Directions of the Economic and Social Development of the USSR for 1981-1985 and for the Period up to 1990, adopted by the 26th CPSU Congress, envisages in the realm of wages for workers and employees supporting: strengthening the dependence of wages and bonuses for each worker on his personal labor contribution and on the end results of the work of the collective; increasing the incentive role of wages for raising labor productivity, and in improving the quality of products and savings in all kinds of resources; and perfecting the rate system and the fixing of labor rates.²

The policy conducted in the area of organization of wages in the 80's must, of course, be oriented toward solving these problems.

At all stages of the development of the economy of our country the Communist Party and the Soviet government have considered the growth of the national welfare and increasing the material and cultural level in the life of the people to be the basic strategic goal of their economic policy. The successes achieved by our society in this area are indisputable. It was emphasized in the decisions of the 26th CPSU Congress and the subsequent Central Committee Plenums, that in the 80's the Communist Party will persistently continue to carry out its economic strategy.

However, when examining the strategy directed toward raising the national welfare, one must not artificially separate it from its natural objective prerequisites—the growth and increased efficiency of all of social production. In other words, it is impossible to overemphasize the fact that an increase in income is possible only in proportion to growth in labor productivity and improved results in everyone's work. Ignoring the unalloyed truth of this statement has an unfavorable effect on one's attitude toward labor, on the desire to labor at the peak of one's abilities, and on the growth of labor productivity of the individual and of society.

Guided by the principles recorded in the materials of the 26th CPSU Congress as well as the succeeding Central Committee Plenums, one must place at the center of the problems of the economic development of the country in the coming decades /the tasks of increasing production efficiency—and on this basis alone, increasing the growth of the national welfare/. The wage policy must also be subordinated to solving these principal tasks of the socio-economic development of the country. All ongoing measures in this area must be oriented toward /achieving high rates of scientific-technical progress and increasing the efficiency of social labor and production/.

Proceeding from the importance of ensuring the primacy of growth in production efficiency over the tasks for growth in the nominal income of the workers, one can make a more definite formulation of the main tasks and the goals for growth in the wages of the workers and employees, and for improving their organization on the basis of the principles expounded in the decree of the CPSU Central Committee and USSR Council of Ministers of 12 June 1979, "On Improving Planning and Strengthening the Influence of the Economic Mechanism on Increasing Production Efficiency and Work Quality." Primarily, this pertains to the goals and methods of carrying out centralized measures in the wage sphere.

In the 60's and 70's, the centralized measures were oriented principally toward increasing their minimum and average levels; that is, toward solving primarily the social tasks. But increasing the incentive role of wages in achieving high results in production and labor was provided primarily on the basis of broad introduction of new methods for economic and material incentives at the level of the branch, enterprise and its subelements. In the 80's the necessity was brought forth to subordinate the entire arsenal of means, both in centralized and in decentralized regulation of wages, to the task of intensifying the influence of the organization of wages on production efficiency and on increasing work quality.

Many years of experience in the organization of wages in the branches of the national economy testify to the fact that periodic increases in wage rates and fixed salaries for workers and employees permit improving the entire system for organizing wages. Therefore accomplishing these measures on the basis of a minimum of 80 rubles per month was found to be expedient both in the 11th Five Year Plan and in the following years. But it is obvious that the introduction of new wage rates and fixed salaries must be accomplished /with a reorientation from simply increasing the level of wages to achieving growth on this basis in labor productivity and work quality/. With the level of average wages reached in the national economy for workers and

employees (177 rubles in 1982³), and plans for their increase (up to 193 rubles by 1985), further growth should be supported only in proportion to an increase in one's personal labor contribution to the overall results.

With the introduction of new wage conditions it will be necessary to carry out (based on the growth of the absolute amount of the rates): replacing the old norms with advanced, technically well-founded norms; increasing the effectiveness of bonus systems and rejecting bonus payments made solely for the purposes of setting a certain wage level; establishing differentiation in wage rates and fixed salaries in accordance with changes in the complexity, conditions and intensiveness of labor in different branches and kinds of production, occurring under the influence of scientific-technical progress; and putting the system of wage rates for jobs and for workers in order. In modern conditions, along with the necessity to ensure greater wage differentiation in accordance with labor results, it is important to keep in mind the changes in labor which have objectively come to pass under the influence of scientific-technical progress: in the kind of technology employed; in the conditions, and in the professional skill structure of the cadres. Improving the wage rate system must lead to greater uniformity in paying workers who perform work of the same complexity and to eliminating unfounded differences in wages among the branches of the national economy. At the same time it is necessary to increase, in accordance with the actual changes taking place in job content, the correlations in wages for the simplest and the most complex work; to increase differentiation of wage rates and fixed salaries in connection with working conditions, having in view at the same time not only the difficulty and the danger, but also the degree to which certain kinds of labor are unattractive; and to establish more well-founded correlations in wages for various categories of workers.

In the All-Union Scientific Conference, which took place in December 1982, on the subject of "Problems in Improving Distributive Relationships at the Modern Stage," organized by the USSR Academy of Sciences Economics Institute by the scientific council on the complex problem of the "Economic Regularities of the Development of Socialism and the Competition of the two Systems," by the USSR Ministry of Higher and Secondary Specialized Education [Minvuz] and the Central Board of Scientific and Technical Societies--in a number of reports and speeches the idea was put forth, that the wage category (position) reflects only the potential capabilities of the worker, and wages must be established in consideration of the realization of these capabilities in the concrete results of his labor activities. One cannot agree with such an opinion. Presenting the matter in such a manner that the category and the position of a worker reflect merely his potential abilities, one cannot help but fall into error; for from the point of view of social valuation of labor, the award to a worker of a certain skill category or job description also represents an evaluation of his contribution to social production. In those cases where a worker does not provide that contribution (of his own fault or for reasons beyond his control), a deviation from the rule has taken place which, it goes without saying, must be corrected. Consequently, the rate was and cannot but remain the basis for regulating correlations in wages. Providing closer ties between each worker's wages and the results actually achieved in one's own labor and in the overall results of the work of the collective should be accomplished primarily by means of bonuses, supplements to the rates, and awards for the results of the work of the collective for the year.

The measures associated with raising the minimum wage rates and fixed salaries for workers and employees are directed toward achieving on this basis growth in labor productivity and improved work quality. It is important to stress that these measures must be preceded by very serious preparatory work on finding reserves for carrying out the transition to the new wage conditions at the expense of enterprise (association) funding, as funds accumulate owing to reduction in the number of workers, simplification of the management structure, and savings in the wage fund as opposed to the level planned for the years of the five-year plan.

A number of problems arise in connection with new elements which appear in the wage structure for workers and employees: the various kinds of supplementary payments and increases. The solution of the problem of the purpose and function of these elements has very great significance in wage theory and practice. Of course the various kinds of supplementary payments and increases which are of a regular nature make payment by wage rate more flexible, and permit connecting to a greater degree the level of wages to labor output. But let us take for example the organization of wages for workers. Here flexibility of rates is provided by: increases for high professional mastery, for combining professions and expanding one's zone of service; by increasing the ratings when working by norms arrived at on the basis of interbranch, technically-based or more advanced normatives; and by payments for overfulfilling production norms. Finally, at an appropriate skill level, a worker's wage rate category can be increased, and consequently his wages as well. In practice, in choosing one criterion or another, many questions arise which must, of course, be resolved on a scientific basis.

An increase for high professional mastery within the limits of the difference between categories (4, 8, 12 per cent of the basic wage rate for an awarded skill category) is quite frequently recommended for those who, within a certain profession and at a given basic wage rate display consistently high mastery (which finds expression in higher quality work, or in increased productivity), or for those who have more seniority on the job or who have completed refresher training, and consequently are better qualified. However, certain reasonable questions arise: But should not better performance on the job and high productivity be encouraged by bonuses? If award of a bonus is accomplished in accordance with these indicators, when at the same time the wage rate is increased for professional mastery, does this not represent duplication? A certain doubt inevitably arises, whether supplementary payment is needed for professional mastery; are they not pursuing the goal of legalizing an increase in the basic wage rate in between periodic evaluations of the wage rate or taking measures centrally, all at once? This question is not a simple one and it must undoubtedly be examined from all sides.

It would seem that everything is quite clear in the case of increases for combining professions. One has combined his job with two or more other professions, and receives additional pay--for the very same volume of work has been performed with fewer personnel, and a genuine economic effect has been achieved. But you see, combining professions is evidence of higher mastery, for which special supplementary payments have been authorized. At

the very same time, combining professions permits carrying out a greater amount of work, and consequently the amount of piece-work earnings also increases. In a case where the combination becomes stable, what happens in essence is that a new combined profession has been established, which is associated with a different kind of basic wage rate, and consequently with a higher level wage rate as well.

The wage practices for supervisory, engineering and technical workers and white collar workers leads to similar rationalizations. Take for example the right which enterprise managers enjoy, to establish supplementary payments of up to 30 per cent of their salary, for engineering and technical workers and above all master craftsmen, as well as for white collar workers; for designers and technologists, the supplements may reach 50 per cent of their salary.⁴ How can these increases be reconciled with established salaries, within the limits of the minimum and maximum amounts (the "forks") stipulated in the scheme for salaries and skill categories for specialists? Let us suppose, and this can be acknowledged, that the width of the salary "forks" is not satisfactory in practice: it is too small to single out the most highly-skilled specialists and technical executives according to salary scale, and in this situation supplementary payments for high skills are justified. However, it is necessary to define precisely the criteria for establishing increases, and this must be done in a centralized manner. If they should be defined as labor achievements--high-quality performance of the assigned work, the timeliness of its execution, and perhaps also the complexity of the functions carried out by a given worker within the general limits of the responsibilities of his position--then is it proper at the same time to take into consideration the length of service and level of special training, as this is quite often done and is proposed in various kinds of recommendations? For in the final analysis the special training and length of service determine the effectiveness of labor. It would seem more proper to bring the effectiveness of the work to the forefront; but then how does one handle bonuses? After all, it is precisely the bonus that should be primarily associated with certain labor achievements, and the salary should be considered stable to a greater degree, and not the variable factors which characterize the work of one worker or another.

In connection with the new wage rate system which is being prepared for introduction, which provides a base wage of 80 rubles per month, the Scientific Research Institute for Labor has proposed, with the support of the USSR State Committee on Labor and Social Problems, broader application of skill categorization for specialist positions occupied by engineers and economists as well as technicians. It is proposed to establish qualification categories for practically all integral positions for engineers and economists, as well as for positions which are found only in certain branches and manufactures. It is proposed to place at the basis of such categorization--differences in complexity, diversity, independence and responsibility of the work carried out within the bounds of the position, and correspondingly, the requirements for level of special training and length of service by specialty or on jobs which provide the skills in a given specialty. With a transition to these wage principles it appears to

be expedient not to employ increases for high professional mastery, nor for high qualifications to those specialists for whom skill categories will be established. And for those for whom categories will not be established, the right to grant increases can be retained, but only for the period prior to the introduction of the unified wage principles for these specialists, which is based on awarding skill categories.

Speaking of organization of the system of salaried positions for engineering and technical workers, it is necessary to touch on one more question. In the attempt to tie in base wages with quantitative and qualitative indicators of the work of the collectives of associations (enterprises). the wage system for which improvements were still being prepared in the 9th Five Year Plan was brought forth, and at the present time the principle of establishing wage categories at the enterprises on the basis of the indicators which characterize the results of work, has for all practical purposes been implemented. Included in the number of indicators which authorize increasing wages for the group were—exceeding the average growth rate for labor productivity, and the proportion of highest quality goods produced.

With all the attractiveness of such a solution, the following question arises: But is the association of categorization by the enterprises (associations) with the factors employed legitimate, or would it not be more proper to utilize for these purposes a differentiated approach to allocating funds for paying bonuses to workers who have achieved higher quantitative and qualitative indicators in the work of the collective, and increasing the size of the awards paid to specific workers? For these purposes one can use either supplementary payments for high qualification, or personal salaries, and differentiation of salaries within the limits of the "forks". It seems that the system of indicators which the enterprises (shops and sections) ascribe to groups for paying the supervisors is supposed to provide for differentiation in the wages of supervisory personnel depending on the relatively stable factors of—the complexity of the job and above all the functions performed. Among these indicators one can cite: the state of the enterprise's equipment—the complexity of the equipment installed; the volume and the breadth of the range of goods produced as well as the frequency of change; the scale of cooperative ties; and the degree of dispersal of the production—whether or not there are branches, or sections, and how far they are from the base enterprise; and others.

The necessity for precisely defining the role and the functional purpose of certain structural elements of wages as an important feature in conducting a policy for improving the organization and differentiation of wages is also spreading to the system of regional regulation. With the help of such regulation it is necessary not only to create equitable conditions for reproducing the labor force, but also to support certain advantages in the living conditions of the population in the eastern regions, the regions of the Far North, and in the adjacent oblasts, as well as in the extremely mountainous and arid localities. On this basis it is important to place limits on the the function of the regional coefficients and the increases for longevity which are used primarily in the northern regions. These coefficients were designed for and must become the means for providing equitable conditions

for reconstitution of the work force, and they must be based on differences in pay for reconstitution of the work force among the various regions of the country. Increases to wages for longevity (the northern type) should create advantageous living standards for those working in severe natural and climatic conditions and in those which deviate from the norm.

In order to provide scientifically-founded inter-regional correspondences in wages it is important to complete the formation of a unified system of regional coefficients in Siberia and the Far East, and also continue introduction of increases for a continuous period of work in the southern regions of the Far East and Siberia. If one proceeds from the premise that the national economic significance for branches and enterprises finds expression in the levels of standard wage rates and salaries (if necessary the amount of their differentiation may be increased), then on this basis it is expedient to establish uniformity for the amounts of the regional coefficients utilized in the separate regions, having made them equal for all workers. In order to create incentives for attracting workers to new economic development sites, the Scientific Research Institute for Labor has worked out and brought up for discussion a proposition for introduction of raises in these regions (in connection with the uninhabitedness of the locality), for the purpose of providing wage advantages in the first years of development with gradual abolition in proportion to the formation of a normal infrastructure, and the approach of economic and socio-cultural living standards in the region to the level customary for the country.

In examining the basis for the policy in the sphere of organization and differentiation of wages in the 80's, one must touch on two additional important aspects: trends in the correspondence of wage levels by categories of workers; and interbranch correspondences in wage levels.

The sharpness of the correspondence in wage levels which has taken shape in recent years in the majority of the production branches of the national economy for the basic categories of workers, for industrial workers and engineering-technical workers [ITR], is well-known. Levelling of incomes by labor, which is a result of changes in the substance of the labor, is one of the regularities of the development of the socialist way of life. However, if one examines the wage dynamics for the various social groups of workers from the position of the incentive role which the wages play, not all income levelling proves justifiable. In order to provide the necessary correspondence in wage levels for the ITR and the white collar workers, it appears to be proper for the first time in 25 years, to provide for higher growth rates for the salaries of ITR as apposed to increasing the level of the basic wage rates for workers, when carrying out centralized measures in the wage sphere. Also serving this purpose are the measures directed toward increasing the flexibility of the wage system for supervisory and ITR, and for increasing their association with work results--with an increase in the technical level of production and the degree to which the goods produced correspond with modern requirements; with a reduction in the amount of materials, labor and energy expended in production; and with carrying out a larger volume of work with fewer personnel.

The results of an experiment on improving the wage system for designers and production engineers in a number of production associations in Leningrad are of vital interest in this respect. For the period of the experiment (1983-1985) a permanent wage fund has been established for the organizations and their subelements, on the basis of limiting the number of workers. Within the limits of the approved wage funds, the production associations are permitted to introduce increases to the salaried positions for the designers and production engineers who are directly occupied with developing new, highly-efficient equipment and technology; and, in consideration of their personal contribution, to bring the salaries of the production engineers into line with those of design engineers of the corresponding categories. It envisages approving rosters of permanent staff members and salaried positions for the workers without observing the average salaries in the plan and the correspondences arrived at in the number of the separate categories of workers. A bonus system has been established for the designers and production engineers in accordance with their personal contribution to the creation of new equipment and technology. If the experiment at the Leningrad enterprises produces positive results, the salaries established for the individual engineering and technical workers without taking into consideration average salaries according to staff duty positions, can become part of the regulations (so long as in doing this the total planned wage fund for the enterprise is not overspent). This permits providing increased salaries for the ITR and more closely associating them with the results of their work.

At the June (1983) CPSU Central Committee Plenum the need was observed for working out a system of organizational, economic and moral measures which would provide interest in modernizing the technology and which would make it unprofitable to work in the old way. In this connection it seems expedient to permit awarding larger bonuses to the engineering and technical workers who consistently introduce new equipment and technology, and at the same time making the ITR and above all the supervisors materially responsible for not taking the necessary measures for transition to new equipment and technology, and for producing goods for which there is no consumer demand.

Posing the following problem appears to be very important in contemporary conditions and especially for the future: Material incentive must continue to be one of the important economic levers for increasing the effectiveness of collective and individual labor, but only those who have actually earned it should be rewarded. Bonuses must be paid for exceeding the indicators established for labor productivity, for the quality of its results, and for reducing expenditure of material resources as compared to the established norms. It is hardly fair, when bonus payments for current labor results are received by practically all the workers, and the bonus becomes an integral part of everyone's wages--when the worker does not think about his wages without the bonus, independent of the results of his work. It is natural that in such situations the bonus payments lose their incentive significance.

Obviously, in contemporary conditions it is necessary to follow more consistently and steadily Lenin's thesis that: "Awarding bonuses has as its purpose increasing labor productivity by means of incentive raises whenever

a worker exceeds the established norms for productivity, improves the quality of the goods, or reduces production costs."⁵ It was not for nothing that V.I. Lenin stressed that bonuses "...must be given in such a way, that they reward those who have displayed heroism, diligence, or talent..."⁶

It must be acknowledged that today these precepts are not being put into practice—practically all hourly wage rate workers and an absolute majority of the piece rate workers receive premium pay. However it is also entirely possible and necessary to strive to tie premium payments more closely with the specific indicators upon which the workers have direct influence. This problem applies most of all to the payment of engineering and technical workers, whose bonuses quite often are oriented on the indicators of the work of the enterprise as a whole and do not sufficiently consider the specific achievements of the individual workers, as well as the results which depend chiefly on them.

In organizing the premium pay system, it appears to be necessary to change to a method of crediting bonuses for the individual indicators for which the bonus fund has been allocated.

Through the mechanism of increasing the absolute size of the basic wage rates and salaries, perfecting the criteria for crediting bonuses, and also declining to pay bonuses for fulfilling certain indicators and conditions, it is possible to make a gradual transition to awarding bonuses for labor achievements above the norm, and thereby to ensure that the bonuses fulfill their true functional role in organizing remuneration according to labor.

In its time the creation of a powerful technical base in our country made it preferable to provide material incentives to workers occupied in the branches which are crucial to industrial development. This was chiefly reflected in significant wage increases in the branches of heavy industry as opposed to light and food industries, and in industry as a whole as opposed to agriculture and the branches of the nonproduction sphere. At the present time, when the chief task of economic policy is raising the material and cultural standard of living of the people, all-round development is required both in the branches of heavy industry and in those which directly support satisfying the various needs of the populace. Changes in inter-branch correlations in wage levels and their growth rates among the spheres of the national economy and industrial branches cannot but reflect these processes. At the same time it is clear that even now wage advantages must be assured in those branches upon which technological progress chiefly depends, and which serve as the basis for intensification of production and increasing its efficiency.

Comparative analysis of growth rates of average wages from 1960 to 1980 testifies to the advantageous increase of their dimensions in the branches of material production, as compared with the branches in the nonproduction sphere. In the first—excepting, of course, industry—wage rate growth exceeded the corresponding average indicator for the national economy. The greatest growth in wage rates was in agriculture and construction; significantly lower than average rates were found in such branches as public

education, health care, science and scientific services. Relative differences between branches have declined; however, data on absolute differences in average wage levels by branch to a significant degree correct the general thesis on reduction of their interbranch differences.

In the future reduction will occur in interbranch differences in the complexity of the work and the skill of the workers; working conditions will improve--above all in the branches and types of production, where these conditions are below norms; and there will also be significant growth in wage levels in all branches of the national economy. All of this, while not removing the final problem of considering the national economic significance of the branches in determining wages, requires searching for new approaches for its solution. It appears to be sensible to follow a line for further reduction of the relative differences in wage levels by branches of industry and the national economy, and supporting the necessary absolute differences in these levels.

Finally, we shall cite one more principally important question in wage policy for the near future, which one must keep in mind: the prevailing opinion held by many scientific workers and economic administrators must be overcome, namely that the existing difficulties and unsolved problems in the sphere of increasing production efficiency can be solved chiefly on the basis of perfecting the mechanism for paying wages and for material incentives. Undoubtedly, ensuring closer ties between labor measures and pay measures is very important to the solution of this problem, and perfecting distribution in accordance with the quantity and quality of the labor expended and its results provides a great positive effect. But practical work experience at the very same time indicates, that with the growth of the absolute amount of wages they cease to be the only and quite frequently the primary motive which causes one to choose the sphere in which applies one's labor, and applies one's efforts to achieve high efficiency. Problems in improving the organization of wages must be examined in close association with improving working conditions and job content, and with improving the technical basis for production--and solving on this basis the problems which relate to the area of satisfying the workers' social and domestic needs. Material incentives will play a positive role and will create the real conditions for solving the tasks set for the Soviet people by the Communist Party only in combination with creative, moral and social incentives.

FOOTNOTES

1. "Materialy Plenuma Tsentral'nogo Komiteta KPSS 14-15 iyunya 1983 goda" [Materials on the CPSU Central Committee Plenum, 14-15 June 1983], Moscow, 1983, pp 11-12.
2. See: "Materialy XXVI s'yezda KPSS" [Materials on the 26th CPSU Congress], Moscow, 1981, p 177.
3. "Narodnoye khozyaystvo v 1982 g." [The National Economy in 1982], Moscow, 1983, p 382.

4. See: "Polozhenie o sotsialisticheskoy gosudarstvennoy proizvodstvennoy predpriyatii" [The State of the Socialist State Industrial Enterprise], Moscow, 1965, p 83; "O dal'neyshem sovershenstvovanii khozyaystvennogo mekhanizma i zadachakh partiynykh i gosudarstvennykh organov. Postanovlenie TsK KPSS ot 12 iyulya 1979 goda" [On Further Improving the Economic Mechanism and the Tasks of Party and State Organs. Decree of the CPSU Central Committee of 12 July 1979]; "Ob uluchshenii planirovaniya i usilenii vozdeystviya khozyaystvennogo mekhanizma na povysheniye effektivnosti proizvodstva i kachestva raboty. Postanovlenie TsK KPSS i Soveta Ministrov SSSR ot 12 iyulya 1979 goda" [On Improving Planning and Strengthening the Influence of the Economic Mechanism on Increasing Production Efficiency and Work Quality. Decree of the CPSU Central Committee and USSR Council of Ministers of 12 July 1979], Moscow, 1979 (para. 53b), p 58.
5. "SU RSFSR" [Collection of Laws of the RSFSR], 1920, Numbers 61-62, p 276.
6. V.I. Lenin, "Polnoye Sobraniye Sochineniy" [Complete Works], Vol 42, p 215.

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LENINGRAD ENGINEERING WAGE EXPERIMENT DETAILED

Moscow EKONOMICHESKAYA GAZETA in Russian No 15, Apr 84, pp 11-14

[Text] The Efficiency of Engineering Work by A. N. Gerasimov, secretary of the Leningrad CPSU Obkom

In the Leningrad Izhorskiy Zavod Production Association an experiment is underway in regard to the improvement of labor organization and pay of the workers of the design and technical services.

By decision of the USSR Council of Ministers, an experiment is being conducted in Leningrad during 1983-1985 in regard to the improvement of the labor organization and pay of the workers of the design and technical subdivisions which are a part of the Izhorskiy Zavod imeni A. A. Zhdanov, the Leningrad Metal Plant imeni XXII S"ezd KPSS, the Nevskiy Zavod imeni V. I. Lenin, the Elektrosila imeni S. M. Kirov, and the Leningrad Electromechanics Plant production associations.

The object of the experiment is to increase the responsibility and material interest of the workers of the design and technological services of these associations in the increase of the technical level and quality of the developments, the lowering of the metal-intensiveness, labor-intensiveness and energy-intensiveness of production, as well as in the execution of a larger volume of work with a smaller number of personnel.

It is no accident that the experiment is being conducted in Leningrad. Our city has at its disposal a large scientific potential, which is concentrated in the organizations of the USSR Academy of Sciences, scientific research institutes and design offices, in associations and enterprises, and in institutions of higher education. Quite a number of projects connected with the realization of special purpose programs are equipped with their developments. Long-range sources of energy are being created, high-strength and heat-resistant polymer materials and protective silicate coatings are obtained. Highly-efficient turbines, generators and diesel motors of the next generation have been developed and manufactured, as well as machine tools with numerical program control, various types of transportation equipment and instrumentation.

Today more than two-thirds of the growth of labor productivity in Leningrad industry is attained through the realization of measures of scientific-technical progress. Since the beginning of the five-year-plan alone, the labor of more than 60,000 workers has been saved and the proportion of manual operations has been reduced. The further comprehensive mechanization and automation of labor and the use of computers are becoming increasingly important.

In connection with this, the role of engineering work is growing. You see, the satiation of the enterprises with modern equipment and the utilization of the latest technology sharply increase the demands of engineering and technical workers, the level of their qualifications and competence. The experiment being conducted is precisely aimed at increasing the efficiency of the work of designers and technologists.

In Leningrad a certain experience has already been accumulated. The very course of the competition of the Leningrad workers under the motto "From the High Quality of the Work of Everybody--to the High Work Efficiency of the Collective" predetermined the struggle for high final results, attained with a smaller number of workers.

A total of more than 9,000 specialists of 5 Leningrad associations are participating in the experiment (as of January of this year, a sixth enterprise was added--the NPO [Scientific Production Association] Central Scientific Research Institute for Fuel instrumentation). Already during the very beginning of the experiment, and especially during the period of the attestation process, the number of designers and technologists was reduced by 632 persons. People, whose qualifications and competence did not allow them to engage in creative engineering work with full efficiency, were asked to work in other subdivisions. Out of 118 structural subdivisions converted to the conditions of the experiment, 2 departments, 8 laboratories, and 9 offices were abolished, and 18 sections were reorganized. At the same time, 2 subdivisions were enlarged.

The wages of the freed workers became a unique incentive fund for those who remained. In every enterprise a different attitude was taken in regard to the distribution of this fund. In the Elektrosila Association, for example, during the first 6 months after the beginning of the experiment, the minimum size of the bonus amounted to 2.1 percent, and the maximum--33.9 percent of the existing salary of designers and technologists. Moreover, a differentiated approach to every worker was realized: 34 percent of them received increases for high qualification, 18--for the reduction of the deadlines of developments, 15--for the fulfillment of above-plan work, 14--for the liquidation of bottlenecks, and 19 percent--for lowering labor-intensiveness and the increase of the technical parameters of articles.

At the same time, in the Nevskiy Zavod Association, 88 percent of all increases were paid for the fulfillment of work on the most important subjects. But in the LEMZ [Leningrad Electromechanical Plant], unfortunately, they approached the distribution of the increases in an equalizing manner.

Thus, the mechanism of the distribution of the material incentive fund for designers and technologists has not yet been fully formed. However, the

stimulating significance of increases in the increase of the efficiency of the work of engineering personnel is not subject to any doubt. During the past 8 months since the beginning of the conduct of the experiment, a growth of more than 3 percent of the volume of their own scientific research, experimental design and technological developments in comparison to the plan was registered in all associations. In all enterprises the plan tasks in regard to the reduction of the labor-intensiveness of production were overfulfilled by more than 12 percent. The tasks with respect to saving materials, fuel and electric power were also overfulfilled.

In all subdivisions included in the experiment, there was an increase in creative output, a spirit of competition manifested itself in the work of specialists, and there was a notable strengthening of discipline in execution.

But now the thorough exercise of the organizational and economic mechanism of the conduct of the experiment has become no less important than the development of the methods of the formation and utilization of the savings of the wage fund and the bonuses of the participants in the experiment. The development of norms for the planning of the work in all subdivisions, the improvement of their structure, the mechanization of the work of designers and technologists, and the improvement of standards in design and technical documentation are its most important elements.

It goes without saying that to set norms for engineering work, as for any creative work, is difficult. On the one hand, ideas that are embodied in efficient and high-quality developments are not born every day. But, on the other hand, engineering work today is not merely the embodiment of one's own ideas, but also the realization of already existing developments. For this reason, the norm setting for the work of plant designers and technologists is a realistic matter.

In the Izhorsk Plant Association, already before the beginning of the experiment, a successful attempt to develop norms in the design and technological subdivisions was made with the aid of the leading institutes, as well as individual tasks for staff members. And the norms do not hinder, but, on the contrary, stimulate the creative work of the Izhorskiy Plant workers, who create complex equipment for nuclear power stations, powerful quarry excavators, and other equipment.

The concrete final technical and economic results, which must be attained in the course of the experiment, could be the basis for the planning of the basic indicators of socio-economic development in the 12th Five-Year-Plan. Among them, in our view, there must be indicators for the reduction of the periods of the creation of new equipment and technology, the increase of production volume and the output of the most important machines and equipment, the increase of quality and the increase of the share of production of the highest quality category in the total volume of production.

Up to now only the surface layer of the experiment has been utilized, figuratively speaking, "the cream has been skimmed off". During the second stage intensified work is required in regard to the creation of the organizational-

economic mechanism. It would appear that the efficiency of the work of designers and technologists will be substantially increased also through the reorganization of the structural subdivisions, including the transition to flexible structures, the creation of scientific production complexes, integrated and specialized brigades and subdivisions. In Leningrad there is already experience of their creation and evidence of the efficiency of their work.

The conduct of the experiment is a matter of honor and responsibility for the Leningrad workers. We are gladdened by the constant interest in it on the part of the USSR State Committee for Science and Technology and the ministries which include the enterprises conducting the experiment.

The course of the experiment is under the constant assiduous control of the party committees. Not long ago, the bureau of the Leningrad CPSU Obkom at its session examined the question of the conduct of the experiment in all 6 enterprises and explained to the participants in it the necessity of improving the stimulation of engineering work not only by means of increases to salaries, but with the utilization of all means conducive to the increase of creative output. The organization of socialist competition among specialists, aimed at increasing the efficiency of engineering work, occupies a conspicuous place here.

The most considerable results in the conduct of the experiment were attained by the workers of the Izhorskiy Plant Association, whose experience is also presented in the pages of "Bibliotekha" [Little Library]. Here the organizational and economic preconditions for the stimulation of the creation and production of complex new equipment have already been created. A great deal is being done to increase the level of mechanization and automation of engineering work and to introduce, in the shops of the association, modern equipment with the use of industrial robots and machine tools with numerical program control. The Izhorskiy Plant workers are successfully coping with the tasks for all plan indicators.

Today the experiment is entering a new phase. The task at hand is to attain a much higher degree of equipment of the design and technical services by means of the automation of engineering work. The corresponding decision to allot to the Leningrad enterprises taking part in the experiment the necessary equipment has already been taken.

The first results of the work of the designers and technologists in the new conditions indicate that the limits of the experiment can be expanded through the connection of a number of other Leningrad enterprises, in which developed design and technological subdivisions exist.

The Formation of the Wage Fund (From the Regulation of the Procedure for the Conduct of the Experiment, approved by the USSR State Committee for Labor and Social Problems and the Secretariat of the AUCCTU)

For organizations and subdivisions participating in the experiment, the general manager of the association, proceeding from the number of workers ac-

cording to the staff list of these organizations and subdivisions on 1 January 1983, approves a constant wage fund for the workers for 1983-1985, the size of which it reports to the ministry. The indicated fund includes the sum of the actually established salaries and increases. The average annual sum of funds (calculated for the last three years) paid for temporary disability is excluded from the fund.

In case of a change of the plan volume of scientific research, experimental design, and technological work, the wage fund of design and technical organizations may be changed in accordance with a norm approved by the ministry.

The Creative Output of Specialists Is Growing by G. Shutkov, general manager of the Izhorskiy Plant Association

Since July of the past year, an experiment is underway in our association in regard to the strengthening of the role of designers and technologists in the creation of new equipment and technology on the basis of the improvement of the organization and payment of their work. Little time has gone by, but the results are interesting, promising, and already present.

I am convinced that the thing here is not only the increased salary for specialists. You see, the main change concerns not the sizes of bonuses, increases and additional payments, but the principle of their distribution. Those workers began to receive additional material rewards who are making an increased contribution to the common cause, and the collective itself gives the assessment of their contribution. It is one thing when additional pay, let us say, is distributed in accordance with the principle "To all sisters--by links", and quite another when a careful analysis is first made of what has been done by you. For example, already in August of the past year 33 designers and technologists did not receive a bonus. At the same time, almost 100 persons were honored with bonuses, exceeding the previously established limit.

How does this mechanism operate? Already during the period of preparation for the experiment, the norms for labor-intensiveness for design and technological work were developed. This made it possible to assess more accurately how successfully this or that worker is coping with the production tasks. Wages became really wages: More for those who worked more and better, and less for those who take it easy behind the back of others. In the collectives they regarded this with approval.

Discipline has become stronger. The new form of accounting gives complete information about the standardized and actually worked time, the percentage of norm fulfillment, and the average monthly output per person.

By virtue of what has there been an expansion of the possibility of material stimulation in design offices and technical departments? Above all, by virtue of putting into operation cost accounting levers that previously had not operated. All 19 subdivisions included in the experiment are working on a cost accounting basis. The indicators for labor and wages, the standard expenditures and the reduction of labor-intensiveness, the economy of metal

and fuel and energy resources are determined in advance. The fulfillment of these tasks directly influences the payment of bonuses and the size of increases for workers of departments, sectors, offices and laboratories.

New conditions of work are conducive to the increase of the creative "output" of specialists. Here is one of many examples.

The collective of the group of I. Kubyshkin from KB-1 [Design Office 1], which was instructed to create a body for a fundamentally new excavator, attempted to execute this development at such a technical level so as to surpass foreign models. The designers knew that, if they will succeed in securing a reduction of capital and operating expenses compared to analogous machines of other countries and moreover fulfill the task more quickly than planned, the authors will receive considerable increases to their wages. And the group coped with the task that was set and its members received from 25 to 160 rubles in addition to their salary--depending on the level of participation in the common work.

Such an increase is not only a material incentive. As it was previously: Whether a person fulfilled a responsible task poorly or well--his wage practically did not change at all as a result. A certain moral meaning is "placed" in the money which is earned nowadays: Here my efforts are worth something, so I did not try in vain, so in the future, too, the collective's success will not go unnoticed. Thus an aspiration for high output arises, an increased concern for the common enterprise.

It would seem that this aspect is especially important. Today the moral and material incentives "operate" as a single whole, mutually supporting and strengthening each other. The acknowledgement of the value of your work by the collective is one of the most effective stimulating motives for creative search and the increased efficiency of work.

An appropriate assessment is also given to miscalculations, omissions, and carelessness. Let us say, the technologists from Office No 15 of the department of the chief welder of power plant engineering according to the results of work in November did not receive the increases envisaged for high quality of work. They did not receive them because they were unable to achieve the solution of the problems of improving the technology for the manufacture of pipe joints. This was unusual for many: The quality of work is now sure to be taken into account in the determination of the size of material compensation.

Of course, work in the conditions of the experiment required of the designers and technologists a significantly greater exertion of effort than previously. By far not all proved to be ready for this. Somebody left already during the course of the preparation for the certification of personnel, when he understood that he will not pass the check for conformity with modern requirements, somebody later. A total of 168 work stations were freed in our enterprise during half a year.

In the usual conditions in design and technological subdivisions this would call forth a stream of excuses: We cannot fulfill the task since we do not have enough people. Here there was nothing of the sort! Not a single design office, not a single department, and not a single laboratory even once requested additional manpower even for very difficult developments.

At the same time, both the tempo and the quality of the work of designers and technologists increased significantly. One of the main results is a significant increase in the efficiency of the labor of specialists. Here the most important indicator is the attained saving of labor expenditures for the production of articles calculated per worker of the design and technological services. Today the assessment of the work of specialists depends directly on the magnitude of this indicator. As is apparent in the diagram on page 5 [of the original], it doubled during the past year in comparison with 1982, and during the current year it must increase by a factor of 3. There has been a decrease in the periods of the development of design and technical documentation. The refusals because of sketches of low-quality workmanship decreased to one half of the compared level .

In Design Office 1, for example, the working draft for an excavator with a bucket capacity of 15 cubic meters was completed a month ahead of schedule. Its productivity, compared to a machine with a bucket of 12.5 cubic meters was increased by 18 percent, the relative metal-intensiveness was lowered by 15 percent, and the operating expenditures--by 10. And the weight decreased by 9 tons.

And in the department of the chief technologist for excavator construction the technical documentation was processed 2 months sooner than planned. It excludes 17 assemblies out of 84 and envisages the combined mechanical processing of parts and the broad use of machine tools with numerical program control. As a result the production cycle of the manufacture of the rock giants was shortened.

As the result of the work in the conditions of the experiment, a lowering of labor-intensiveness and a shortening of the manufacturing cycle of the basic equipment for nuclear power plants can be observed. This exerted an important influence on the overfulfillment of the plan for the output of such equipment in 1983 by 4 percent and the increase of its production by 18.3 percent compared to 1982.

The experiment in the association is continuing. At present we are setting ourselves the task of expanding in every conceivable way the mechanization and automation of design and technological work.

In the process of the preparation for the experiment it was established: The labor of approximately 1,400 specialists of the design and technical services may be automated fully or partially. Broad-scale automation of the labor of designers and technologists will make it possible to increase the productivity of their labor by 15-25 percent.

The System of Increasing the Efficiency of the Labor of Specialists of Design and Technical Services of the Izhorskiy Plant Association

Basic Content

1. The Development of Norms of Labor-Intensiveness for All Design, Technological and Research Work in the Association.
2. The Introduction of Plan Cost Accounting Indicators of Work for Every Structural Subdivision Taking Part in the Experiment.
3. The Material Stimulation of Highly-Productive Labor of Specialists of the Design and Technical Services.
4. The Improvement of the Structure of the Administration of Design Offices, Departments and Laboratories.
5. The Execution of the Certification of Designers and Technologists for Conformity of the Position Being Held and for the Ability to Carry Out the Work in Conditions of the Experiment.
6. The Organization of Accounting and Control of the Activity of the Subdivisions and the Specialists of Design and Technological Services.

The experiment in the association has been underway since July of last year. In the process of the preparation and in the course of the experiment, a certain system has taken shape here which is aimed at the increase of the efficiency of the labor of specialists of the design and technical services. It includes 6 basic elements which are closely interrelated.

The Norms of Labor-Intensiveness

One of the central places is occupied by the development and introduction of norms of labor-intensiveness for all design, technical and research work in the association. The responsibility for the development of the norms and their maintenance at the appropriate level is placed on the laboratory for norms and research of the administration for labor organization and wages. Under the methodical guidance of the laboratory, norms of labor-intensiveness are developed for all types of work in the design and technical subdivisions on the basis of inter-industry and industry norms. Today 16 such norms are in operation.

For the further improvement of the norm documentation, a plan-diagram of its revision has been approved, taking into account the actual expenditures of labor of specialists for the fulfillment of the production tasks.

Cost Accounting

All subdivisions included in the experiment operate today in the conditions of cost accounting. The following cost accounting plan indicators of the subdivisions are developed and approved for a year, with a break-down by

quarters:

- The volume of work (in thousands of rubles and products list);
- the number of workers according to the staff list;
- the wage fund;
- the growth of labor productivity;
- the savings of material and fuel and energy resources;
- the lowering of the labor-intensiveness of the output produced.

Moreover, as a necessary condition for material incentive within the limits of the experiment, the following has been determined for design and technical services:

- The lowering, by no less than 20 percent, of the number of refusals due to documentation prepared with low-quality workmanship;
- the execution of the work schedule for the unification of parts, units and materials being used for the articles that are produced;
- the fulfillment of tasks in accordance with multiple route technology.

On the basis of these plan tasks, cost accounting indicators for departments, sectors, offices and laboratories are developed in the subdivisions themselves.

If the cost accounting indicators are not fulfilled, the workers do not have any right to receive bonuses for the fulfillment of the plan by the association or to the establishment of increases. The fulfillment of the cost accounting indicators for departments, sectors, offices and laboratories also influences their bonus payments and the establishment of increases. They are coordinated with the cost accounting indicators of the structural subdivision working in the conditions of the experiment.

Material Incentive

In the Izhorskiy Plant Association regulations have been developed and are operating in regard to the material incentive of specialists of design and technological services for highly-productive work, the lowering of material, labor and energy expenditures for the output of production, and for the increase of the quality of work.

The conditions of the regulation apply to designers, technologists, senior engineers (senior technicians and engineers (technicians), directly engaged in the development and introduction of new, highly-efficient equipment and technology.

The manager of a structural subdivision has the right, within the limits of the approved wage fund, to submit for approval to the general manager the staff lists of the design and technical subdivisions without observing average salaries according to salary schedules and the established correlations of the number of categories of workers.

The material stimulation of specialists in the conditions of the experiment is supplemented by the incentive of the workers of the design and technical services through savings of the wage fund compared to the level approved for every structural subdivision.

The basic source of the economy of the wage fund are cash funds freed in the structural subdivision by virtue of the reduction of the number of personnel in comparison to the staff list, leaves without pay or with partial pay in accordance with existing legislation, as well as in connection with the temporary disability of individual workers.

Savings of the wage fund of subdivisions which are not used during the current year are directed into the material incentive fund of the subdivision and utilized in subsequent years until the end of the experiment.

The savings of the wage fund formed in the structural subdivision may be used upon representation by the manager of the subdivision:

- For the establishment of the salaries of highly-skilled engineers and technologists who regularly overfulfill the plan tasks with respect to the volume of work of high quality at the level of the salaries of engineers and designers of the corresponding categories;
- for the establishment of increases to the salaries of designers and technologists engaged in the development and introduction of new, highly-efficient equipment and technology in the period of time of the fulfillment of work, for the execution of especially difficult and urgent work;
- for the establishment of increases to the salaries of designers and technologists carrying out the most responsible developments, for high skill and professional mastery for the period to the nearest certification;
- for the additional pay of workers in the presence of the combination of official duties or the execution of duties of workers who are temporarily absent, for the increase of the volume of work being carried out.

The increases and additional payments are established differentially, taking into account the personal contribution of every worker to the development and introduction of new, highly-efficient equipment and technology, which secure an increase of the basic technical characteristics of the article (productivity, capacity, reliability, etc.), while lowering labor-intensiveness, material-intensiveness and energy-intensiveness and observing the established deadlines for the work with a smaller number of personnel.

The increases to salaries, as well as the dimensions of additional payments for every worker for the increase of the volume of work in the presence of the combination of duties or the execution of duties of temporarily absent workers are not limited by the maximum dimensions.

The increases to the salaries of workers may be established for a period of 1 month to 1 year. They may be changed or reduced when the worker fails to observe the deadlines for the completion of work or its individual stages,

when the quality of the work is unsatisfactory, in the case of the impractical solution of design and technical questions arising in production, and in the case of violations of labor and production discipline.

The Improvement of the Structure of Administration

In the association the structure of the administration of the design offices, departments and laboratories has been reviewed for the purpose of its improvement. The analysis showed that an unjustified duplication in the work of some offices and superfluous links exist in a number of cases. Thus, in the administration of metallurgy, departments for the long-term development of metallurgical production and a design and technical department, instead of the departments for long-term development, technical preparation and design, were created for the more practical solution of the questions of the development of metallurgical production. In the laboratory of Design Office-2, 2 divisions and 1 office were cut. As a result, the structure of the subdivisions has become more compact and more clear-cut.

The Certification of Specialists

One of the important measures of increasing the responsibility of specialists for the technical level and quality of developments is the certification of



Key:

1. SAVINGS OF LABOR EXPENDITURES for the production of articles in the Izhorskiy Plant Association calculated per worker of the design and technical services (in percentages of of the attained savings in 1983)
2. Izhorskiy Plant
3. Plan

designers and technologists for conformity with the position being held. During the first certification, conducted in June of the past year, attention was also given to the ability of the specialist to execute the work in the conditions of the experiment. Subsequently it is planned to conduct certifications on a regular basis, every three years, in order that they become an inherent element of increasing the efficiency of engineering work.

Preparation has also begun for the certification of work stations of engineering and technical personnel for their conformity to the contemporary level.

Organization of Accounting and Control

What changes has the experiment brought in the organization of accounting and control of the activity of specialists of the design and technical services, as well as in the organization of their work? No later than 3 days before the beginning of a month, every specialist receives a personal production task, prepared on the basis of the plan of the subdivision. A report on the fulfillment of the plan, certified by the chief of the subdivision, is the basis for the determination of the labor contribution of the staff member with the aid of the coefficient of labor participation (KTU). It is utilized for the distribution of bonuses and increases, in the summing up of socialist competition, in the certification of staff members, and for presentation for advancement in position.

In addition to the plan indicators, the coefficient of labor participation includes also the quality of work, labor discipline, participation in socialist competition, and some other points. The assessment of the coefficient of labor participation is done in numbers.

The council of the subdivision sums up the work of the specialists for the accounting period (month, quarter, year). This public organ, which is elected by the collective of the subdivision, is given broad rights. It establishes the actual coefficient of labor participation of every executor according to the results of the work for the period under review, takes part in the planning of the work of the subdivisions, and reviews individual creative plans and socialist obligations of specialists. The task of the council includes the struggle for the strengthening of labor and production discipline and the development of the creative and social-political initiative of the workers.

Controversial questions in the determination of the coefficient of labor participation are taken to the general assembly of the subdivision for discussion. The decision of the assembly is final.

Unification and Efficiency by B. Maslenok, chief designer, candidate of technical sciences

Already during the period of preparation for the conduct of the experiment, which is aimed at the increase of the role of the designers and technologists in the acceleration of the introduction of the results of scientific-

technical progress, we clearly understood that without the creation of a system of automated planning (SAPR) it is impossible to attain the efficient execution of the growing volume of work with an unchanged number of specialists. The connection: Designer--visual display electronic computer--graph plotter with the appearance of the technologist at the work station--this is our future. But the system of automated planning itself does not plan, it only accelerates this process. At first its "memory" will have to be saturated with methods and design solutions known today. Moreover, the number of selected elements must be limited and the standard solutions in regard to model units and parts must be entered into the memory of the machine, which will make it possible to create a bank of applied programs for electronic computers and to free designers of the routine work of the redrawing and recalculation of the already found solutions and leaves their hands and mind free for the execution of original, really new developments.

The quality of the plan and the quality of production, installation and operation are interrelated in many respects, and, first of all, this connection is determined by how much the new consumer qualities of the article are created on the basis of thoroughly tried and tested solution. Thus, a necessary condition of the increase of the reliability, adaptability to streamlined manufacture, and efficiency of the developments is the unification and typification of the design solutions. Such solutions guarantee the optimal technological process, the utilization of verified and certified equipment, and the formation of settled relations with respect to subcontracted and material-technical supply.

In the practice of the work of the designers of the Izhorskiy Plant Association, the unification is taking place in regard to the following basic directions:

- Unification of standard sizes of the materials and semi-manufactures being used (plates, bars, pipes, etc.), as well as some design elements;
- intra-project and inter-project unification of units and parts;
- the creation of new projects (larger unit capacity or with new characteristics) on the basis of unified equipment.

A further development of unification is typification or the creation of model designs of individual units, parts or sets.

The unification of standard size materials and semi-manufactures being used is aimed at simplifying the material-technical supply of production, the organization of the work of the blanking shops and increasing the coefficient of metal utilization. The work that has been conducted in the association in this direction has made it possible to bring about a 20 percent reduction of the number of the qualities of steel being used and on the average by 40 percent--the quantity of standard size semi-manufactures.

The unification of some design elements, such as radii, necks, threads, etc., made it possible to achieve a significant reduction of cutting and measuring tools, the expenditure of materials and, what is the main thing, it helped to increase the quality of the execution of the design requirements.

Reduction of the Number of Standard Sizes of the Basic Materials Utilized for the Production of Power Engineering Equipment in the Izhorskiy Plant Association (During the Time of the Conduct of the Experiment)



Key:

1. Plates

2. Bars

3. Pipes

The unification of design elements contains significant reserves for the improvement of technological designs and the simplification of the processes of the organization of production with the simultaneous improvement of quality. This is a lot of work, labor-intensive work, which requires the careful analysis of all sketches previously turned out and must find reflection in the effective norm documentation, i. e., standards and specifications of the enterprise. Such standards have been developed and have become effective. Moreover, the lists "Materials and Elements Used" and "Unification" have been introduced in the volume of obligatory design documentation.

This made it possible for the chiefs of the design departments--the chief designers for units and types of equipment, the chief designer--to implement more effective control over the level of the developments from the point of view of unification.

Unification--this is not a campaign, but normal planning work. A schedule of work on unification during 1984-1985 has been compiled and approved to control its course.

On this basis a schedule for the automation of design work has been developed and approved for the period to 1990, for the realization of which we already now are teaching designers to make use of electronic equipment in their work and are creating the base program supply for the development of sketches and the necessary calculations.

Increases to Salaries

Increases to salaries of designers, technologists, leading senior engineers (according to a list of positions approved by the director general of the

association) are established by the managers of the organizations and subdivisions taking part in the conduct of the experiment, with the consent of the director general of the production association, and increases to the salaries of the managers of these organizations and subdivisions--by the director general of the production association.

The indicated increases are repealed or reduced in the case of non-observance of the deadlines for the completion of the work by the worker or its individual stages, in case of unsatisfactory quality of the work, in case of the impractical solution of design and technological questions arising in production, and in case of the violation of labor and production discipline.

(From the Regulation of the Procedure for the Conduct of the Experiment Approved by the USSR State Committee for Labor and Social Problems and the AUCCTU Secretariat).

Flexible Forms of Organization of the Work of Specialists by Ye. Milyavskiy, chief welder

Welding is one of the basic processes of the manufacture of production in the association. The high labor-intensiveness of this work and the extraordinarily strict requirements with respect to its quality force us to pay special attention to the automation of welding operations. Today the level of the mechanization and automation of welding operations amount to 73.5 percent, surface welding--82.5 percent, and autogenous cutting--80.5 percent.

The experience of the manufacture of unique welding designs accumulated in the association made it possible for the articles of the Izhorskiy tool makers to be on the level of the best models in the world in regard to their technical indicators.

At the same time, the percentage of manual labor in our enterprise is still rather high. Thus there exists the problem of the automation of the welding of nonradial branch pipes of large diameter. For the time being, the speed and quality of the work here depend on the high skill and conscientiousness of the electric welders.

An experiment conducted in the association helped to bring about an effective solution of this problem. Participants in the search included staff members of the design bureau of the department of the chief welder and the central welding laboratory. The group successfully coped with the task entrusted to them. The introduction of the new technological process will make it possible to lower the labor-intensiveness of the manufacture of the article by 30,000 norm-hours and to free 10 skilled electric welders from heavy manual labor.

It is significant that these results were attained within short periods of time and, so to speak, by small forces. Here the advantages of the new organization of the labor of specialists visibly manifested themselves.

Utilizing the possibilities provided by the work in the conditions of the experiment, we decided to practice still more widely the creation of tempo-

rary groups and brigades, aimed at a certain subject. But now much more difficult tasks are placed before such temporary collectives.

Thus, at the beginning of the current year a brigade was formed from 10 specialists for the engineering provision of the organization of the highly-mechanized production of excavator units for specialized sectors. It is characteristic that, although the brigade was headed by the chief of the central welding laboratory and, moreover, has other welding specialists as well, this collective is an integrated one. It includes equipment designers, technologists and electronics specialists. The brigade was given the following task: To increase the volumes of production output on the existing area with a smaller number of workers through the increase of the level of mechanization and the quality of welding work.

The brigade was given a large amount of independence in the selection of the participants in this development from other scientific research and design and technological organizations. The collective itself plans its work and is entirely responsible for its success.

It would appear that the appearance of such forms of work of the design and technological services is one of the most important consequences of the experiment.

The Effect of Work in the New Fashion by L. Shteynberg, chief of the office of the chief technologist

The improvement that has been made in the course of the experiment in regard to the structure of the administration of the design and technological subdivisions has changed the character of our work in many respects. A new form of the labor organization of specialists--temporary special purpose and brigades--has appeared and has already succeeded in establishing an excellent reputation for itself. Here is one example.

During the past year our association received two gas-cutting machines with numerical program control. This is very economical, highly-productive equipment. But the appropriate programs are needed for its operation. To do them manually is expensive.

True, the service of the chief technologist has at its disposal an electronic computer for machine tools with numerical program control, but this is an exceedingly specialized complex, with the aid of which they never solved other problems. However, it was decided nevertheless to connect this equipment to the composition of the programs. But since the deadlines were exceedingly pressing (the installation of the machines had already begun), they--in the interest of the practical execution of its task--did not begin to "squeeze" a department into the plan, but organized a special group.

Our group was given the volume of work, the deadlines and a guaranteed material incentive fund, which it received the right to dispose of in accordance at its own discretion if it succeeds in coping with what has been outlined. Within short periods of time the group fulfilled the task that had been set.

Moreover, in the process of the work in our enterprise the thought arose to create a system of automated preparation of photocopy machines for those gas-cutting installations which have already been operating in the shops for a long time. The idea was approved, and within a short period of time we solved a new problem.

I want to emphasize that this fact is not an exception, but only one of the illustrations of how work in the new conditions is conducive to the fuller realization of the creative potential of every specialist.

Assessment--In Accordance With the Final Results of Work by V. Skripchenko, chief technologist

What new things has the experiment brought to the work of the technological services? Above all, the fact that today the determination of the contribution of the technologists is directly related to the final results of their work. The cost accounting plan indicators of the technological subdivisions orient the specialists toward the lowering of the labor-intensiveness of the output being produced, the growth of labor productivity, and the economy of material and fuel and energy resources. Thus, first and foremost is the real output of the labor of technologists, expressed in concrete cost accounting indicators.

The experiment places before us the task of further increasing the efficiency of the work of the technologists as well.

The analysis of the systems of technological planning operating in the associations as well as in the industry shows that their basic shortcomings are high cost and long planning periods, an insufficient level of mechanization, and the practical absence of automation of the solution of engineering tasks.

At the present time, the development of an automated system of planning in the enterprises of nuclear machine building and boiler manufacture of the ASTP AEM [not further identified] is undertaken in the Izhorskiy Zavod Association, jointly with the industry institute of the Atomkottlomash Scientific Production Association and with the involvement of a number of institutes of the country. The technical plans of a subsystem for the planning of the processes of the treatment of cutting, a subsystem of technical and economic calculations, have already been developed and are in the stage of agreement, a pre-machine data bank of technological information about the tool, equipment, materials, blanks, etc. has been organized.

The execution of a large volume of work by a smaller number of workers, as well as the growth of the quality and economic efficiency of the developments, according to the plan, are to be secured through the introduction, in the association, of the highly-efficient professional-personal computers Iskra-226, which are oriented toward the solution of the problems of the automation of the work of technologists directly at their work station. With this goal in mind and in cooperation with the LEMZ [Leningrad Electromechanical Plant] Association, the department of the chief technologist is working on the development of the program and information supply of planning, the norm-setting

and documentation of technological processes, and, above all, the processes of mechanical treatment with the greatest volume.

And here the new possibilities of the utilization of highly-skilled personnel, which the experiment opens up, acquire great significance. It becomes clear that the structure of the technological (and also design) subdivisions can be flexible, capable of reacting sensitively to developing technical problems. The creation of temporary special purpose groups and brigades makes it possible to attain this.

But the matter is not limited to the creation of temporary brigades and groups. In our enterprise the possibility has appeared of organizing new subdivisions "under promising ideas". For example, this is the path we have taken now to secure the development of group technology for the processing of parts and the introduction of complexes utilizing robotics. This is a very promising direction. The creation of automated sectors will make it possible to increase the output of production from a unit of equipment by 20 to 50 percent and increase labor productivity by a factor of 2 to 5.

At the present time, work on the creation of automated sectors is in the stage of the creation of a large computer memory bank, which will make it possible to form batches of the starting of uniform parts for equipment with numerical program control, select the necessary means of loading blanks on the machine tool, and to automate the transportation and warehouse complexes.

First Conclusions

The experiment being conducted in a number of Leningrad production associations is yielding positive results. This was noted at the session of the commission formed for the control of the contemporary conduct of measures for the improvement of planning and the perfection of the economic mechanism.

In all design and technological organizations and subdivisions taking part in the experiment, there has been an increase in labor productivity, a strengthening of labor and production discipline, a reduction in the time required for the preparation of technical documentation, an increase in the quality of design and technological developments, an improvement in a number of operating characteristics of the equipment being produced, and a lowering of the labor-intensiveness of their manufacture.

At the same time, the commission noted that the further increase of the labor productivity of designers and technologists requires the accelerated equipment of their work stations with means of mechanization and automation. There is a lack of scientifically-justified norms for the conduct of scientific research work. Further improvement and simplification is required in the procedure for the preparation, agreement and registration of the technical documentation in the development and erection of the production.

Thus, in the course of the experiment problems are being brought to light which must be solved for the further development of what has been begun.

The increase in the efficiency of engineering work requires the intensification of cost accounting of the design and technological subdivisions. Up to now, for example, their cost accounting relations with the other services of the association have not been fully developed. In the opinion of specialists, it is necessary to make a more courageous transition to the brigade organization of labor and to create integrated brigades for the solution of urgent technical problems.

The experiment is continuing. Its success depends in many respects on the energy and efficiency of the specialists and design and technological services working in the new conditions, as well as on the level of their being supplied with the requisite equipment. This is also indicated by the experience of the Izhorskiy Plant workers. On the basis of the results of their work in the new conditions, it is recognized as necessary that control be established over the increase of the validity of norms for design and technological workers. The question of the supply of the association with the means of computer and office mechanization facilities to increase the efficiency of the work of designers and technologists has been reviewed and solved.

At the same time, those labor collectives, to which the conditions of the experiment do not extend, must not stand on the sidelines. In his speech before the electors on 2 March 1984, comrade K. U. Chernenko emphasized that "the search and the introduction of the new must take place not only in enterprises involved in some kind of an experiment or another."

It is necessary to manifest more independence and initiative on all levels and to undertake a courageous search in the name of increasing the efficiency of the economy and the growth of the prosperity of the people.

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LABOR

ONE PERCENT PRODUCTIVITY INCREASE IMPACT ON ECONOMY CITED

Moscow VESTNIK STATISTIKI in Russian No 2, Feb 84 pp 68-69

[Article by D. Dummov, chief of the Budgetary Statistics Administration of the USSR Central Statistical Administration and candidate of economic sciences; and I. Dmitrichev, senior economist in the Budgetary Statistics Administration of the USSR Central Statistical Administration: "The Significance of a One Percent Increase in Labor Productivity"]

[Text] At the December (1983) Plenum of the CPSU Central Committee comrade Yu. V. Andropov set a specific goal--to achieve in 1984 an increase in labor productivity one percent above what is called for in the plan and to reduce production costs by an additional 0.5 percent.

Below we present some data on labor productivity and the significance of a one percent increase.

A rise in labor productivity is one of the central plan goals. As early as the First Five-Year Plan half of the increase in industrial production was achieved by raising labor productivity; in the Fifth Five-Year Plan 68 percent of the increase in industrial production was the result of growth in labor productivity; in the Eighth Five-Year Plan, 73 percent; and in the Ninth Five-Year Plan, 84 percent. In 1984 the plan calls for increased labor productivity to provide 97 percent of the increase in the national income, 90 percent of the increase in industrial production and construction and installation work, and for all of the growth in agriculture and rail transport.

Productivity in industry should increase by 3.4 percent in 1984, in construction by 3.3 percent, and in agriculture (the public sector) by 8.5 percent.

Over a thirty-year period the rate of increase in national labor productivity in our country has been almost twice that in the United States. Between 1971 and 1982 in industry the average annual increase in labor productivity was 4.2 percent, while in Great Britain and Japan it was 3.6 percent, in the FRG and France it was 3.0 percent, in Italy 2.6 percent, in the United States 1.7 percent, and in Canada 1.1 percent.

In 1984 a one percent increase in labor productivity in industry is equivalent to over 7 billion rubles. In 1960 this same increase was equivalent to less

than 2 billion rubles. Accordingly, for every sector a one percent increase in labor productivity has "put on weight" over the years.

For power engineering workers a one percent increase in labor productivity in 1984 will mean the output of an additional 14.7 billion kilowatt-hours of electrical power; for petroleum workers, it will mean the extraction of an additional 6.2 million tons of oil (with gas condensate), and for natural gas workers, it will mean an additional 5.8 billion cubic meters of gas. In several other sectors of industry an increase in productivity of just one percent will mean an additional 1.1 million tons of finished rolled ferrous metal; 7.2 million tons of coal; 311,500 tons of mineral fertilizers (based on 100 percent nutrient substances); 5700 tractors; 188,000 tons of steel pipe; and 1.3 million tons of cement. Textile workers will be able to produce an additional 119 million square meters of fabric of all types; workers in the machine building industry will be able to produce an additional 55,400 refrigerators and freezers, 46,000 washing machines, 13.2 passenger cars, and 88,500 televisions. Of course, these increases must be achieved with a high level of product quality and a broad product assortment, factors which were discussed at the December (1983) Plenum of the CPSU Central Committee.

In agriculture (the public sector) a one percent increase in labor productivity will make it possible to obtain additional gross production valued at almost 1 billion rubles.

A one percent increase in labor productivity in rail transport would make it possible to ship additional freight totalling 38.5 billion delivered ton-km.

In capital construction a one percent increase in productivity will provide today an additional increase in construction valued at approximately 700 million rubles. This is the equivalent of building a major atomic electric power station, a plant for producing mineral fertilizers, or a residential complex of 3.6 million square meters, which is equal, for example, to the available housing in Ashkhabad.

A one percent increase in labor productivity will make it possible to conserve the labor of approximately one million workers employed in sectors in the physical production sphere, and to add 5.3 billion rubles to the national income.

The plan for 1984 calls for an increase in the role of intensive factors in economic development, improved utilization of production capacities and fixed capital, broad practical incorporation of scientific and technical achievements and progressive methods, improved administration, planning, and management methods.

An increase in the machine shift coefficient, reducing the labor-intensiveness of production, introducing the brigade method of organizing labor and providing incentives, and a movement to increase production output using the same number or fewer workers will all help to increase labor productivity.

As our economy grows, the price of one working minute continues to grow. In 1984, in just one minute industrial production valued at 1.5 million rubles

will be produced (according to preliminary estimates). In one minute 1400 tons of coal will be extracted, 1200 tons of oil and gas condensate will be obtained, 22,500 square meters of fabric will be produced, along with 248 tons of cement, 17 televisions, and 9 washing machines. All this is under the condition that the minute is filled with highly productive labor.

In recent years many republics have achieved dynamic growth in industrial production and they are increasing labor productivity. During the first three years of the five-year plan there was an average increase in labor productivity of 9 percent throughout the country, while Azerbaijan had at 13 percent rise and Moldavia a 15 percent rise.

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LABOR

WORK AT HOME ENCOURAGED IN LIGHT INDUSTRY

Moscow PLANOVoye KHOZYAYSTVO in Russian No 5, May 84 pp 80-84

[Article by V. Uspenskiy, RSFSR minister of local industry: "The Use of Work Done at Home by Local Industry Enterprises in the RSFSR"]

[Text] The Communist Party and the Soviet government are demonstrating a great deal of concern about meeting the people's ever-growing material and spiritual needs.

The decisions of the 26th CPSU Congress call for accelerated development of sectors of industry that produce consumer goods, in order to provide an expanded and improved assortment of goods and to improve product quality. It was noted at the December (1983) Plenum of the CPSU Central Committee that "All our efforts in economics in the final analysis are aimed at improving the people's standard of living. This is the main socio-political goal of our plans. All successes in the development of production are deemed truly valuable when they help to improve the people's well-being."*

Local industry plays an important role in meeting the demand for consumer goods, including the simplest articles--the so-called trivial items.

For the 11th Five-Year Plan local industry was assigned the task of increasing the volume of production by a factor of approximately 1.4, and improving the quality and assortment of goods and products. One of the conditions for meeting this goal is expanding work done at home, primarily by utilizing the labor of invalids, retirees, and that of rural residents between the agricultural seasons.

When enterprises of local industry utilize work done at home, it helps to solve not just an economic problem--increasing the output of consumer goods--but also the equally important social task of enlisting retirees, invalids, and women occupied with housekeeping to participate actively in socially useful labor, and it also helps them improve their economic position.

*"Materialy Plenuma Tsentral'nogo Komiteta KPSS, 26-27 Dekabrya 1983 goda" [Materials on the Plenum of the CPSU Central Committee, 26-27 December 1983], Moscow, Politizdat, 1984, p 17.

The labor of invalids and people on old-age pensions, including that done at home, has been used for many years by local industry enterprises in the RSFSR. More purposeful efforts to organize work at home were initiated after the USSR Council of Ministers adopted decree No 674 on 14 September 1973 "On Measures for Further Improvements in the Utilization of Retirees' and Invalids' Labor in the National Economy and Additional Benefits Tied to this Labor."

Over the past seven years the Ministry of Local Industry and corresponding administrative agencies have done a great deal of work to organize labor at home and they have succeeded in resolving a number of issues that will help include more invalids, retirees, and women occupied with housekeeping in the work-at-home system. A developed network of receiving centers has been created; motor transport services for people working at home have been improved, as has their supply of equipment and tools; on-the-job training for people working at home has been organized.

The RSFSR Ministry of Local Industry has held seminar-conferences in Yaroslavl (1977), Moscow (1980), and Ryazan (1983); and it has developed a list of articles recommended for production at home, which was sent to all local industry administrative agencies for use in their practical operations. Over the past 3 years the ministry has allocated about 8000 electric sewing machines for household use, over 1500 "Neva" and "Severyanka" home knitting machines, and over 2000 small motor vehicles to improve transportation services for people working at home. Measures are being taken to meet enterprises' demands for material and technical supplies more fully.

In accordance with the five-year plan, the ministry has been assigned the goal of bringing the number of people working at home to 250,000 by 1985 and the volume of goods produced at home should reach 540 million rubles. To improve the work being done to develop work at home, there are plans to set up an additional 36 specialized enterprises for work done at home and 600 receiving centers for the goods produced.

Proceeding from this assignment, the ministry worked out annual plans for the 11th Five-Year Plan aimed at developing work done at home. The course of plan fulfillment and the work of local industry administrative agencies are under the constant control of the ministry. These issues are reviewed regularly at meetings of the collegium. The ministry has summarized and disseminated the positive experiences of a number of administrative agencies and individual enterprises.

The work that has been done has made it possible to bring the number of people working at home today for RSFSR local industry enterprises to 140,000, which represents 27.7 percent of the average number of regular staff employees. In 1983 goods valued at a total of 415.5 million rubles were produced at home, which represents 6.5 percent of the total production output; this includes 50 million rubles' worth of goods produced from local raw materials and industrial waste products. Compared to 1971 the number of people working at home has increased by a factor of 2.6 and the volume of goods produced at home has grown by a factor of 3.4.

Experience shows that for successful development of work at home and to increase the number of people working at home and the volume of goods they produce, it is necessary to create specialized enterprises for this type of work and an extensive network of receiving centers. Today there are 39 enterprises in the republic for work done at home; they include 50,000 people working at home and about 1600 receiving centers.

The Ministry of Local Industry in the Chuvash ASSR, the Lipetsk, Orenburg, and Smolensk administrations, the Leningrad City Soviet Executive Committee, the administration of specialized enterprises that employ invalids, and the Moscow City Soviet Executive Committee all have an extensive network of receiving centers. The creation of a far-flung network of receiving centers contributes to the rational and efficient utilization of motor transport, fuel, raw materials, and supplies, as well as to an increase in the number of people working at home by drawing in people who live in remote areas.

The Ministry of Local Industry and its administrative agencies have plans to create before the end of the 11th Five-Year Plan specialized enterprises in all the autonomous republics, krays, and oblasts that will utilize the labor of invalids and retirees, as well as enterprises for work done at home.

At specialized enterprises invalids and retirees enjoy considerable benefits and advantages in terms of output norms, appraisals, assignment of regular vacations, etc. Furthermore, specialized enterprises (associations, shops, sections) in local industry that are designated for utilization of work done by invalids and retirees can allocate a part of their profits for developing production, economic incentives, and improving the workers' social, cultural, and living conditions: 50 percent can be allocated if invalids and retirees account for at least half of the total number of workers, or 35 percent if invalids and retirees account for 30-50 percent of the total. In individual cases the republic councils of ministers are permitted to leave the enterprises with up to 70 percent of their profits. All this helps to increase employment of invalids and retirees at such enterprises.

For further development of work at home it is necessary to expand the enterprises' production base--to build administrative and warehouse facilities, cutting and set-up shops, receiving centers, garages, and other auxiliary facilities; therefore, enterprises have been granted the right to use part of their profits for these purposes.

Many ministries in autonomous republics are making efficient use of development funds. For example, the Ministry of Local Industry in the Kabardino-Balkar ASSR in one year built a production wing for the newly created "Umelets" combine for work at home; the "Druzhba" combine under the Yaroslavl administration built an administrative-production wing and warehouse facilities with an area of 2000 square meters, and made major repairs on the receiving center. A new wing has been built at the the Kaluga City Industrial Combine and the Tatar ASSR Ministry of Local Industry has finished building a cardboard products factory in Kazan.

A new form of organizing work at home is being developed--home shops, which are being formed in residential areas. The home shops have equipment and service

personnel. Invalids, retirees, and mothers with a large number of children who live in neighboring buildings work at these shops for just part of the work day at a time convenient for them.

In addition to creating specialized enterprises the Ministry of Local Industry and its administrative agencies are working to develop work at home at regular enterprises.

For example, in the local industry administration under the Stavropol Kray Soviet Executive Committee, work at home is being used at 16 of the 18 existing enterprises and there are 1900 people working at home; in the Kalinin administration work at home is being used at 15 out of 19 enterprises, with 1500 people working at home; in the Ryazan administration, it is being used at 10 out of 11 enterprises and there are 1500 people working at home.

Work at home is being used at all the enterprises of the administration of specialized enterprises employing invalids under the Moscow City Soviet Executive Committee, the administration of industrial enterprises employing invalids under the Moscow Oblast Soviet Executive Committee, the artistic crafts and souvenirs administration of the Stavropol Kray Soviet Executive Committee, the local industry administration of the Tambov Oblast Soviet Executive Committee, and others. Throughout the system of the RSFSR Ministry of Local Industry, a total of 685 out of 1356 enterprises are using work at home. Work is being done to develop work at home at the remaining enterprises.

Today at RSFSR local industry enterprises people working at home produce over 1500 types of goods of varying complexity and requiring a varying input of labor. For the most part these are consumer goods: sewn and knitted goods; lacework; embroidered articles; haberdashery articles; rugs; articles made of fur, bone, wood, birch bark, straw, twigs; various souvenirs; embossed metal; toys; cardboard, electrical, labeled, and other articles for household and domestic use, including goods made from local raw materials and industrial waste products.

A great deal of attention is being given to improving the quality of the goods produced. For example, at the administration of specialized enterprises employing invalids under the Moscow City Soviet Executive Committee, more than 450 types of articles are produced by people working at home; the annual output is valued at 47 million rubles; this includes 139 types of articles with the state emblem of quality, the volume of which totals 7 million rubles; 70 types of articles with the "N" index, totalling 3.5 million rubles, are also produced. Goods with the emblem of quality and the "N" index are produced at home by people working under the administration of industrial enterprises employing invalids under the Moscow Oblast Soviet Executive Committee, the Chuvash ASSR Ministry of Local Industry, the administration of the Leningrad City Soviet Executive Committee, and others. Goods made at home, such as rugs, embossed metal articles, down scarves, lacework, and sewn, knitted, and embroidered articles, have also earned the state emblem of quality or the "N" index. A number of goods produced at home are exported.

A great deal of attention is being given to expanding the assortment of goods produced at home. With this aim, in 1982 the ministry assigned all local

industry administrative organs the task of shifting the production of the simplest articles from shops to people working at home. In 1982 and 1983 the production of goods totalling over 70 million rubles was shifted from shops to people working at home. Work is being done to expand and renew the assortment of goods produced at home by developing and putting into production new types of articles. Special attention is being given to increasing the output of goods made from local raw materials and industrial waste products (twigs, birch bark, wood, metal, plastic, etc.)

In order to improve product quality, increase the assortment of goods, and make the work of people working at home easier, the ministry, administrative agencies, and enterprises are making an effort to provide people working at home with equipment and small-scale mechanization devices. These tools and non-standardized equipment, and accessories are manufactured according to requests from enterprises by the "Rosmashmestprom" [RSFSR Local Industry Machine Building] Industrial Association and the "Rekord" plant of the metalworking industry administration under the Moscow City Soviet Executive Committee. Furthermore, many local industry enterprises produce their own small-scale mechanization equipment and devices. For example, in the system of the administration of specialized enterprises employing invalids under the Moscow City Soviet Executive Committee, (with more than 15,000 people working at home out of a total of 30,000 employees) over the last 3 years 2615 devices, 360 units of non-standardized equipment, and 880 different instruments have been manufactured and put into use; they make it possible to utilize the labor of invalids with various physical disabilities. At the Factory imeni the Soviet Army, where 1457 people, or 88 percent of all the employees, work at home, every year about 200 different devices and instruments are introduced which make the invalids' work easier. The devices produced at the factory have no analogues and are original in terms of their design.

A great deal of attention is being devoted to easing the work of invalids and retirees at the "Mostekstil'prom" [Moscow Textile Industry] Association, which has 3178 retirees and invalids in groups I, II, and III working at home. The association produces hand-knitted and hand-woven goods made on small-scale looms. The people who work for the association at home produce 40 different articles with the state emblem of quality and 20 with the "N" index. A new method for knitting outer wear on hand knitting machines is being introduced, which will make it possible to increase significantly the variety of goods produced and to improve their quality. People working at home for enterprises under the administration of the Moscow City Soviet Executive Committee have now received 1780 new machines.

A great deal of work to mechanize work done at home is also being carried out at other enterprises under the administration.

Much is being done to ease the work of people working at home at administrations of industrial enterprises employing invalids under the Moscow Oblast Soviet Executive Committee, in the Yaroslavl, Ryazan, and Smolensk administrations, and elsewhere.

Scientific organizations--institutes, planning and design bureaus, the RSFSR Scientific Organization of Labor in Local Industry Administration--are making

an important contribution to developing work at home at local industry enterprises in the RSFSR. Specialists at these scientific institutions are working on problems involving the future expansion of work at home, improving its organization and mechanization.

Expanding the utilization of local raw materials and industrial waste products is an important reserve for increasing the output of goods produced at home. Successful work in this direction is being done by many local industry administrations. For example, at enterprises of the Komi ASSR Ministry of Local Industry goods produced from local raw materials and industrial waste products account for 70 percent of the total volume of goods produced by people working at home; at enterprises under the Voronezh administration, 43 percent; and at enterprises under the Saratov administration, about 100 percent.

Positive experience has also been gained by the administration for the production of toys and artistic crafts under the Kirov Oblast Soviet Executive Committee. Six years ago the "Umelets" [craftsman] Production Association for using work at home was organized there. The following goals were set for the association: to seek out craftsmen skilled in folk arts, to enlist people who are unemployed into work at home, to revive and develop traditional folk arts and crafts in the oblast. The association worked to develop folk handicrafts and traditional techniques for producing artistic articles from local raw materials (birch bark, willow twigs, bast, straw), wood painting, the cooper's craft, wood carving, as well as hand-weaving and hand-knitting, using wastes from textile production and spinning. A shop was created for primary processing and cutting up of raw materials, which makes it possible to make more rational utilization of natural materials.

The "Umelets" Association (in Kirov) every year procures and processes about 18 tons of birch bark, 15 tons of rye straw, 350,000 pieces of twigs, and 300 kg of pine roots. The birch bark and pine roots are obtained in the forests of kolkhozes and sovkhozes and from the state timber cutting reserve. The people working at home with rye straw obtain their materials themselves in the kolkhoz and sovkhoz fields. A specially cultivated stand of willows is used for gathering twigs, as well as willows growing in river floodlands. All this has made it possible for the association to carry out the production of goods at home with the almost exclusive use of local raw materials and industrial waste products; and since it was first formed the association has been able to increase the volume of production and the number of people working at home by a factor of 3.5. The experience of this association has been approved by the ministry and the corresponding materials have been prepared by the Central Scientific and Technical Information Bureau for dissemination.

Over the last 3 years throughout the Ministry of Local Industry as a whole a total of 127 million rubles' worth of goods have been produced by people working at home using local raw materials and industrial waste products.

The work being done by local industry enterprises to organize shops and sectors in homes for the elderly and invalids is of great importance. Drawing retirees and invalids into labor is an important means for achieving social adaptation, maintaining their health, and preserving and restoring their ability to work.

The Kemerovo local industry administration has had a positive experience in organizing work at homes for the elderly and invalids; people working at such homes account for 41 percent of the work done by people at home for the administration's enterprises. In the administration of industrial enterprises employing invalids under the Moscow Oblast Soviet Executive Committee workers of this type account for 16 percent of all the people working at home; and in the administration of the Leningrad City Soviet Executive Committee, they account for 17 percent.

In 1983 in homes for the elderly and invalids under the RSFSR Ministry of Social Security over 7000 people were enlisted to work at home for enterprises of local industry. They produced goods totalling about 8 million rubles.

The ministry is working to generalize and disseminate the positive experience that has been gained in the development of work at home. For example, the collegium reviewed and approved the positive experience of the Pochinok combine for work at home under the Smolensk administration and of the "Druzhba" combine for work at home under the Yaroslavl administration. It also reviewed and approved the work done by the Chuvash ASSR Ministry of Local Industry, the administration of artistic crafts and souvenir production under the Stavropol Kray Soviet Executive Committee, and the Saratov administration.

Work done at home is quite efficient. For example, as has already been noted, in 1983 goods valued at 415 million rubles were produced at home. In order to produce this same volume of goods under regular shop conditions, it would be necessary to build at least 80 enterprises with a production capacity of 5 million rubles, at a cost of about 120 million rubles of capital investments; also, several years would be needed to build such enterprises.

Local industry in the RSFSR is faced with serious tasks in the future development of work at home. The Ministry of Local Industry and its administrative agencies, organizations, and enterprises have worked out organizational and technical measures to carry out the decisions of the December (1983) Plenum of the CPSU Central Committee. An integral part of these measures is the search for reserves for increasing the production of consumer goods that are in great demand by at least 30 million rubles in 1984. In 1984 there are plans to use work at home to produce goods valued at total of 470 million rubles.

Enlisting more of the unemployed population in socially useful labor will contribute to the successful fulfillment of this goal. Furthermore, engineering and technical personnel and other white collar workers could hold more than one job and work at home in their spare time, with the agreement of the administration and the trade union committee, on their main job; this could also apply to retired kolkhoz workers living in cities and workers' settlements and receiving their full pension without special permission from the kolkhoz, and to kolkhoz workers between agricultural seasons. In order to increase the number of people working at home, the same system should be set up for calculating their pensions that applies to workers at all other state enterprises. Today when calculating pensions for people working at home their wages are limited to 1.5 of the wage rates.

The development of work at home is also being held back by inadequate material and technical support. It is necessary to allocate small trucks, especially those with greater ability to travel over rough terrain, domestic electric sewing machines, "Neva" and "Severyanka" hand-knitting machines and spare parts in necessary quantities, specially designated for organizing work at home in local industry.

The resolution of these problems will make it possible to increase significantly the number of people working at home and the volume of consumer goods produced at home.

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LABOR

MAR'YAKHIN'S BOOK ON FARM LABOR PRODUCTIVITY REVIEWED

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 5, May 84 pp 118-119

[Review by I. Sonina, candidate of economic sciences, of book "Proizvoditel'-nost' truda v sel'skom khozyaystve. Faktornyy analiz i prognozirovaniye" [Labor Productivity in Agriculture. Factorial Analysis and Forecasting] by G. Ya. Mar'yakhin, Izdatel'stvo "Ekonomika", Moscow, 1983, 168 pages]

[Text] In the present stage of building communism, the raising of labor productivity is one of the national economy's cardinal problems. The changeover to predominantly intensive farming calls for a faster rise of labor productivity.

The reviewed monograph comprehensively investigates a wide range of problems associated with measuring, analyzing and forecasting labor productivity in agriculture. Labor productivity is analyzed in its relationship with the other components of production's economic efficiency: the return on investment, and the material intensity of production.

The book demonstrates the different methods of calculating labor productivity and points out their advantages and drawbacks.

Of special interest is the recommended criterion for selecting a method of calculating labor productivity, one that gives a comparative evaluation of the various factors' effect. This is important because the same set of factors to be taken into consideration, in combination with different methods of calculating labor productivity in agriculture (based on the gross, the net farm output, the final product, etc.), will give different relationships between the resulting indicators and the ones influencing them.

We concur with the author's conclusion that "the best yardstick of labor productivity is one that maximally responds to changes in the factors associated with advances in science and technology, and the least to differences in the production structure" (pp 26-27). Coefficients of correlation between the different indicators of labor productivity and the factors of its growth can be used to find the best method of calculating labor productivity (p 29).

The book devotes considerable space to investigating the different indicators that reflect the material-technical, organizational and socioeconomic factors of the rise in labor productivity. The author correctly raises the question of

using more extensively in analyses of labor productivity the indicator of the organic structure of capital, which reflects very comprehensively the material-technical factors in their entirety. Simultaneously the method of calculating this indicator is refined. In our opinion, the proposal is warranted to correct the annual wage fund (the indicator's denominator) in accordance with the circulating capital's turnover.

The investigation of labor productivity in interfarm formations demonstrates that the further concentration of production is an important factor in raising the efficiency of such organizations' operation. At the same time the work emphasizes that an increase in the degree of production's specialization and concentration is not unambiguous from the viewpoint of its influence on labor productivity. Starting from a given level, an increase in a farm's acreage or livestock population can have different unfavorable consequences.

A relationship is demonstrated between the workers' labor productivity on the one hand, and the length of their vocational training and level of general education on the other. For example, the longer the general education and vocational training of tractor and combine operators, the higher their earnings. In this context, for measuring the quality of labor the author recommends using, besides the indicators of skill, also data that characterize the level of general education, the length of vocational training, the periodicity of upgrading skills, and the length of service in the given specialty (p 68).

The book explains in detail the experience with investigating the influence of technical, organizational and socioeconomic factors on labor productivity, using simple and complex groupings, the index method, correlation and regression analysis, and the methods of pattern recognition and component analysis. The author proposes a systematic approach to the investigation of labor productivity. It consists of employing, in the specified sequence, various methods of processing statistical data, in accordance with the content of each stage in analyzing labor productivity.

The analysis of labor productivity is regarded as the starting point and a very important phase in preparing long-range forecasts of labor productivity's rise. The book demonstrates the manner of preparing different versions of the forecasts of labor productivity's growth rate. One of the forecast versions is based on identifying the stable trends of labor productivity's change over time. Other forecast versions are prepared by taking into consideration the effect that the more important factors will have on the long-term rise of labor productivity.

The author formulates the specific requirements regarding the factors that must be taken into consideration when forecasting with the methods of mathematical economics. In particular, a necessary condition is to maintain unchanged the structure of the factors, in both the base period and the forecast period. Much attention is devoted in the book to substantiating the type of mathematical function for expressing the relationship between labor productivity and the dynamic change of this or that factor.

The final phase of preparing forecasts of labor productivity is the test of their validity. One can agree with the hypothesis that "a criterion of a

forecast's validity is to a certain extent the magnitude of the difference between results obtained by different methods and on the basis of different initial data" (p 162). In the author's opinion, significant differences in the value of the forecast variable may be due to the unfortunate composition of the indicators included in the model, or to initial data that are not sufficiently representative. The analog method is offered as an effective way of evaluating the validity of labor-productivity forecasts, its essence is explained, and an experiment is described to use this method on the basis of data for the non-chernozem zone of the RSFSR. However, the monograph is not free of controversial statements and conflicting inferences.

For example, the book equates "efficiency of labor" with "labor productivity." But many researchers distinguish these concepts and assign different economic meanings to them. In the interest of uniform terminology, we believe, these economic categories should not have been confused.

On page 46, the author contends that "in many instances the same indicator can serve as a yardstick for different indicators." In the further exposition of the material (pp 47-71), however, different indicators are presented for each group of factors. Obviously, a qualifying statement should be made that although the assigning of certain indicators to specific factors is conditional, it nonetheless reflects the situations most often encountered in practice.

The investigation of the factors of labor productivity's growth by the method of component analysis, described on pages 120-128, remains essentially unfinished. The author limited himself to forming the principal factors, on the basis of the initial factorial indicators. It would be interesting to continue this investigation, showing the influence of each generalized factor and its contribution to the change in labor productivity.

The book does not show the errors of the labor-productivity forecasts prepared with the help of multifactorial models. Therefore it is difficult to judge their superiority over the trend models that are based on studying the dynamics of labor productivity, without taking the influence of the factors into consideration.

On the whole, the monograph is highly theoretical and contains a number of original statements regarding methods. Its style is clear, and its presentation of the material lucid. We believe that the workers of planning, agricultural and statistical organs will find this book useful.

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